

Respiratory Motion Phantom

The QUASAR™ Respiratory Motion Phantom features a moving Cylindrical Insert in a body shaped phantom. Motion occurs in the superior - inferior direction with variable speed and amplitude. Several different Inserts are available for different applications.

Insert motion is linked to a moving platform designed to carry a respiratory tracking device. The Respiratory Motion Phantom is designed to work with different therapy delivery systems and is compatible with kV and MV CT imagers.



Motion

- Variable breathing rate, 4 – 50 respirations per minute
- Variable amplitude, 0 – 4 cm peak-to-peak, horizontal (superior/inferior) direction
- Sinusoidal motion profile

Platform

- Same breathing rate as cylinder
- Fixed amplitude, 1 cm peak-to-peak, vertical (anterior/posterior) direction
- Two motion profiles, sinusoidal and typical patient respiratory cycle
- Compatible with RPM™ respiratory tracking system from Varian

Moving Inserts

- Lung Equivalent Insert (cedar) and optional Acrylic Insert each have a 2 cm diameter hole for an ion chamber holder
- Ion chamber holders available for most Farmer ion chambers
- Holders available for MOSFETs and other devices.
- Optional imaging insert, contains a sphere and cube
- Optional film cassette, with pins to show dimension and orientation of film

Controller

- Analog speed control, digital read out in breaths per minute
- Switches for Run/Stop and Forward/Reverse
- Optional 30 m cable for control of motion from outside bunker or imaging suite

The QUASAR™ Respiratory Motion Phantom is available in a stand alone version or as an accessory to the QUASAR™ Multi-Purpose Body Phantom.

The QUASAR™ Quality Assurance System for Advanced Radiotherapy allows you to test a wide variety of dosimetric and nondosimetric functions of radiotherapy systems using a standardized set of test objects.

A valuable part of any quality assurance program the QUASAR™ phantoms are ready to be incorporated into your QA protocols today. The phantoms are used for regularly scheduled testing, as well as commissioning new systems and upgrades, and testing repairs.

QUASAR™ provides you with confidence that your radiotherapy systems are performing to their full potential.

QUASAR™ Respiratory Motion Phantom Specifications

- Body Oval; 30 cm wide, 20 cm high, 12 cm long, oval, acrylic, 7 kg
- Drive unit; 20 cm long, 15 cm wide, 12 cm high, 5 kg, acrylic in field of view
- Respiratory Phantom mass; approximately 20 kg with Body Oval and all options
- 2 openings in Body Oval; each 8 cm diameter, for drive unit and moving Insert
- Platform; 13 cm diameter, carries up to 1 kg
- Power Supply; Input, 100 – 240 V AC, 47 – 63 Hz, International power cords available on request. Output, 24 V DC 2.1 A, 50 W. Approvals; CE, cUL

User's Guide and cardboard container for storage and handling are included with the stand-alone and accessory versions. Optional heavy duty shipping case replaces cardboard container.

Ordering Information

The QUASAR™ Respiratory Motion Phantom is available in a stand alone version or as an accessory to the QUASAR™ Multi-Purpose Body Phantom.

100-1007 QUASAR™ Respiratory Phantom (stand-alone)
Includes body oval with 2 openings, motion assembly, cedar insert, ion chamber holder (NE2571 0.60 cc Farmer), standard storage case, and Users Guide.

- or -

100-1008 QUASAR™ Respiratory Assembly (accessory to QUASAR™ MP phantom)
Includes User's Guide and Cedar Insert, motion assembly and standard case

Options

500-3305 Acrylic Insert
500-3315 Film Cassette Insert
500-3317 Imaging Insert
500-3320 30 meter cable
500-2003 Heavy duty shipping case (optional) 8 kg (for 100-1007)
500-2001 Heavy duty shipping case (optional) 5 kg (for 100-1008)



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Modus reserves the right to make changes without notice. Phantom may not be exactly as shown.
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