

# Verify IGRT Plans and Avoid Gated Treatment Errors



## SIMULATE PATIENT BREATHING

The QUASAR™ Respiratory Motion Phantom is a programmable state-of-the-art breathing simulator for conducting quality assurance testing on radiotherapy systems. Using a personal computer to communicate with the QUASAR™ Respiratory Motion Phantom, the software application downloads patient respiratory waveforms to the phantom, simulating the breathing function.

#### **KEY FEATURES**

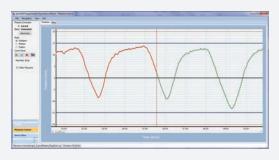
- Operate the phantom directly from a PC or laptop
- Stream patient-specific respiratory motion waveforms
- Interchangeable inserts for multiple testing applications
- Works with a number of motion tracking systems
- Includes an unlimited multiple site software license

#### **BENEFITS**

- Communicate with phantom through local area network
- ▶ Requires no additional programming or customization
- Ability to rotate inserts as they translate to create 3D motion
- Compatible with VXP, .CSV, .TXT, .DCM, .LOG, .DAF, .IMA
- Install the software on an unlimited number of computers

Used for regularly scheduled testing, as well as commissioning new systems and upgrades, and testing repairs, the Respiratory Motion Phantom is designed to move cylindrical inserts in the superior/inferior direction within a body shaped oval with both varying speed and amplitude. Several different moving inserts are available for a variety of applications. Insert motion is linked to a moving Chest Wall Platform designed to carry a respiratory tracking device.

The QUASAR™ Respiratory Motion Phantom is designed to work with different therapy delivery systems and is compatible with kV and MV CT imagers.



Above: Phantom Control Module

#### PATIENT-SPECIFIC SOFTWARE

Included with the phantom is the QUASAR™ Respiratory Motion QA Software application which allows you to import, create, edit and save respiratory waveforms. Easily import patient-specific waveforms from a number of respiratory gating machines including Varian Real-time Position Management™ (RPM), Anzai, Cyberknife, Philips, Respisens, and Siemens. Quickly create custom waveforms or import unique waveforms produced using tab delimited spreadsheet files.



Conveniently edit waveforms using a wide range of functions include adjusting the amplitude, stretching or compressing the timeline and filtering out high frequency noise, low frequency drift and cardiac signals.

The software is compatible with Windows 7 or better.

## MINIMUM TECHNICAL REQUIREMENTS

▶ Operating System: Windows 7 or higher

▶ **Processor**: Intel Core<sup>™</sup> i7 or better

► Hard Disk Space: 5 GB minimum (64-bit)

► RAM: 1 gigabyte (GB) or more

▶ Screen Resolution: 1280 x 1024 pixels or higher

Graphics Card: Intel HD Integrated Graphics or better

#### **SPECIFICATIONS**

▶ 7 kg Acrylic Body Oval: 30 cm W x 20 cm H x 12 cm L

▶ 5 kg Drive Unit: 20 cm L x 15 cm W x 12 cm H

► Total weight is approximately 20 kg with all options

▶ 2 openings in body oval: 8 cm diameter each, for drive unit and moving insert

► Includes cedar insert: drilled for 2 cm diameter acrylic ion chamber holder

► Chest wall platform: 13 cm diameter, carries up to 500 g

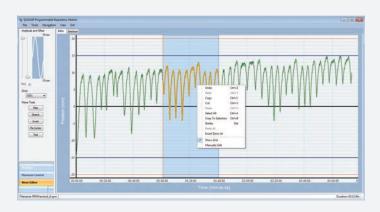
▶ Power supply: Input, 100 – 240 V AC, 47 – 63 Hz

▶ Output, 24 V DC 2.1 A, 50 W.

► Approvals: CE, UL/CSA 60950-1



Above: Optional Rotation Stage accessory for adding 3D motion



Above: Wave Editor Module

## **ORDERING INFORMATION**

100-1011 QUASAR™ Respiratory Motion Phantom

► 1-Software License

► 1-Phantom

User's guide

### **OPTIONAL ACCESSORIES**

500-3330 Rotation Stage for 3D motion 500-2003 Phantom Heavy-Duty Shipping Case 8 kg

#### OPTIONAL INSERTS

500-3305	Acrylic Insert
500-3311	Cedar Insert with Solid Tumour
500-3312	Cedar Insert with Solid Tumour - Drilled
500-3313	Cedar Lung Tumour Insert (Split)
500-3314	Hollow Insert with Screw Cap
500-3315	Film Cassette Insert
500-3317	4D CT Imaging Insert
500-3318	PET/CT Insert
500-3322	MP Insert Adapter
500-3331	Offset Cedar Insert with Solid Tumour
500-3332	Offset Cedar Insert with Solid Tumour - Drilled
500-3333	Offset Cedar Lung Tumour Insert (Split)
500-3395	Cedar Ion Chamber Holder

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