# Programmable Respiratory Motion Phantom

## Simulate Patient Breathing

The QUASAR™ Programmable Respiratory Motion Phantom is designed to move cylindrical Inserts in the superior/inferior direction within a body shaped oval. Interchangeable inserts are available for multiple testing applications, including imaging, planning, and delivery. An optional rotation stage allows inserts to rotate as they translate.

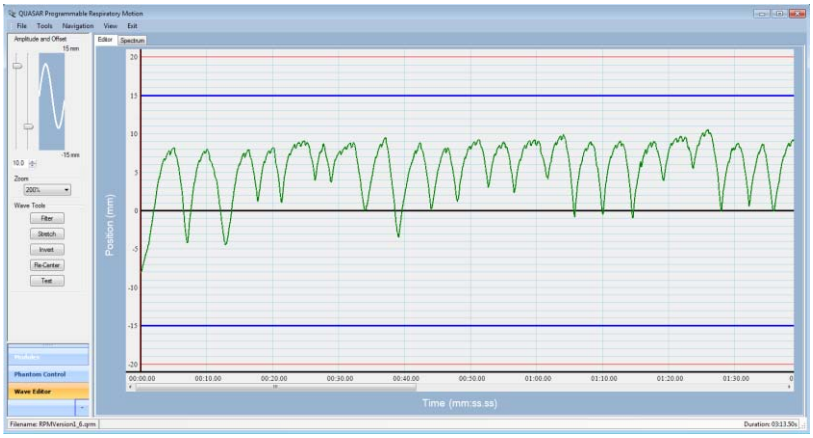

Also available is the Programmable Respiratory Motion Assembly which converts the QUASAR Multi-Purpose Body Phantom to an IGRT gating phantom, thereby offering a cost-effective way to increase overall testing capabilities.

The Respiratory Motion Phantom includes a Chest Wall Platform - moving in the anterior/posterior direction - which is compatible with motion tracking systems from several different vendors.

The Phantom comes with a software application which allows you to display, edit, and run respiratory waveforms. Waveforms are created in the application or imported from respiratory tracking systems from multiple vendors, including the Varian RPM system, or from tab delimited spreadsheet files. The Software Application is compatible with Windows XP, Vista and 7, and runs on desktop or laptop computers.

## Key Features

- Run patient-specific respiratory motion profiles without any additional programming or customization
- Run and control the phantom directly from your laptop or desktop computer
- Communicate with phantom through local area network (LAN)
- Interchangeable inserts for multiple testing applications can be rotated as they translate
- Compatible with motion tracking systems from multiple vendors




*Screen shot – Wave editor module*

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*Accuracy. Confidence.™*

# Respiratory Motion Software

With the QUASAR Respiratory Motion Software application you can import, create, edit, and save respiratory waveforms.

Edit functions include adjusting the amplitude, stretching or compressing the timeline and filtering out high frequency noise, low frequency drift and cardiac signals.

In Oscillation Mode (programmable), Rotation Mode and Position Mode the phantom operates under software control. It can also run in Rotation Mode and Position Mode without a computer, under local control.

QUASAR Programmable 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
- Total weight: approximately 20 kg with body oval and 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 ion chamber holder
- Chest wall 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, UL/CSA 60950-1

The Quality Assurance System for Advanced Radiotherapy (QUASAR™) supports the testing of a wide variety of dosimetric and nondosimetric functions of planning systems, CT simulators and delivery systems.

QUASAR is a valuable part of any quality assurance program. From respiratory motion and MLC beam geometry to daily on-board imaging QA, QUASAR phantoms and software are ready to be incorporated into your QA protocols for regularly scheduled testing. They are also effective for commissioning new systems and upgrades, and testing repairs.

Designed by and for medical physicists, QUASAR quality assurance tools provide you with confidence that every patient is getting the best possible treatment.

The QUASAR Programmable Respiratory Motion Phantom is just one of the many quality assurance tools available from Modus Medical Devices Inc. To find out more, please contact Modus.



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## Ordering Information

100-1011 QUASAR Programmable Respiratory Motion Phantom

100-1012 QUASAR Programmable Respiratory Motion Assembly (for use with M-P Body Phantom, 100-1004)

## Options

500-3305 Acrylic Insert

500-3311 Cedar Insert with Solid Tumor

500-3312 Cedar Insert with Solid Tumor (drilled)

500-3313 Cedar Lung Tumor Insert (split)

500-3314 Hollow insert with Screw Cap

500-3315 Film Cassette

500-3317 4D CT Imaging Insert

500-3318 PET CT Insert

500-3395 Cedar Ion Chamber Holder

500-2003 Case for 100-1011

500-2004 Case for 100-1012

500-3330 Rotation Stage

500-3331 Offset Cedar Insert with Solid Tumor

500-3332 Offset Cedar Insert with Solid Tumor (drilled)

500-3333 Offset Cedar Lung Tumor Insert (split)

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