

## 9860 XL 3D Waterphantom

# RTD

## Realtime Dosimetry



- Largest scanning volume (63x63x40cm) and longest diagonal scan (89cm) available.
- Sufficient scanning area for a 40x40cm field at depth - with enough margin to accurately characterize dose outside the treatment field for IMRT.
- Ideal for measuring large MLC, asymmetric, off-axis and dynamic fields.
- Low-profile scanning mechanism remains submerged during use and allows electron cones to be positioned right at the water surface without affecting the water level.
- Complete software control with RTD Realtime Dosimetry software, with automatic probe positioning for fast setup or scanning.

# 9860-XL

## Extra-Large Waterphantom & Transport Cart with Reservoir



*Indexed probe holder for mounting the ion chamber perpendicular to the beam. The ion chamber may be fixed in any scan direction including at 45 degrees diagonal to the scanning mechanism.*



*Vertical probe holder for mounting the ion chamber towards the beam source.*

## DESCRIPTION

### CONSTRUCTION AND PRINCIPLES OF OPERATION

The 9860-XL (Extra Large) Waterphantom scanning volume allows large fields to be scanned at depth without moving the tank.

Probe movement is driven by precision stepping motors where the number of digital impulses corresponds directly to the travel distance. An independent high-resolution potentiometric circuit monitors probe positioning and detects the probe travel limits along each axis.

All hardware in contact with water is of stainless steel or selected low z-factor materials to prevent corrosion and galvanic effects, enhancing the phantom's longevity. Stainless steel components, used selectively for rigidity and strength, remain sufficiently distant from the probe to minimize effects from scatter.

The waterphantom connects directly to the dual-channel electrometer with a single shielded round cable.

The XL Cart with Reservoir is specifically designed as a transport and storage platform for the XL Waterphantom. The three-point support and leveling system facilitates the alignment of the scanning mechanism with the water surface. Easily accessible knobs level the waterphantom quickly and smoothly, allowing adjustments up to cm in any direction.

Four heavy-duty dual-wheeled casters distribute up to 1000lbs/450kg of phantom, water and cart weight without damaging flooring in the treatment room. All casters lock independently to assure secure positioning and easy maneuverability.

## WATERPHANTOM SPECIFICATIONS

	<b>Tank Dimensions:</b> (Internal)	<b>Scanning Dimensions:</b>	
<b>Width:</b>	76.0cm	Diagonal Scan:	89.0cm
<b>Length:</b>	70.5cm	X-Axis:	63.0cm
<b>Height:</b>	49.5cm	Y-axis:	63.0cm
		Z-axis:	41.5cm
<b>Sampling Resolution:</b>	0.1 mm (1/10 mm) mechanical, 0.05 mm (1/20 mm) electronic Positional Repeatability +/-0.1mm (1/10mm)		
<b>Scanning Speed:</b>	Minimum slew rate is 5cm/second in each axis. Actual speed depends on the scanning protocol used.		
<b>Power:</b>	Universal 90-240 Volts AC, 47-63Hz; 45 Watts		
<b>Weight:</b>	32kg / 70lbs net; 54kg / 120lbs shipping weight		

## TRANSPORT CART SPECIFICATIONS

<b>Dimensions:</b>	<b>Overall:</b>	<b>Platform:</b>
<b>Width:</b>	81.5cm / 32.0in	81.5cm / 32.0in
<b>Length:</b>	86.5cm / 34.0in	86.5cm / 34.0in
<b>Height:</b>	72.5cm / 29.0in	5.0cm / 2.0in
<b>Platform Height Range:</b>	72.5cm to 114.5cm from floor (42cm range)	
<b>Platform Weight Capacity:</b>	300kg / 660lbs	
<b>Power:</b>	115 or 220 Volts, 50/60Hz; 300 Watts Universal IEC connector for waterphantom Supplied with 7m retractable power cord	
<b>Weight:</b>	150kg / 330lbs net; 165kg / 360lbs shipping weight	
<b>Floor Load:</b>	Approx. 300-400kg / 750-1000lbs with full waterphantom	