

Scanditronix Wellhöfer offers a complete range of solid and small waterphantoms to support modern dosimetry protocols, e.g. AAPM TG-51 and IAEA TRS-398. All phantoms fulfill highest mechanical engineering standards to ensure optimal accuracy and durability. Next to the phantoms Scanditronix Wellhöfer has a complete range of products including the Dose 1 reference class electrometer, radiation detectors for dosimetry of photon and electron beams and radioactive stability check devices. Prior to the shipment the equipment is calibrated in our calibration facilities.

One dimensional waterphantoms

One dimensional waterphantom for absolute measurements according to AAPM TG-51 and IAEA TRS-398 dosimetry protocols.



WP1D – manual waterphantom

One dimensional, stand-alone waterphantom for absolute dose measurements according to TG-51 (lead filter option needed) and IAEA TRS-398 dosimetry protocols. The measurement depth can be manually adjusted with 0.1 mm steps and read out on the incremental encoder with integrated display.



WP1D – motorized waterphantom including Smart Control Unit (SCU)

One dimensional, stand-alone motorized waterphantom for absolute dose measurements according to AAPM TG-51 (lead filter option needed) and IAEA TRS-398 dosimetry protocols. The measurement depth can be adjusted in steps of 0.1-100 mm with the SCU. Up to 8 data sets (e.g. Linacs) with each 62 measurement depths can be preset and stored in the SCU. The SCU can be operated from both the treatment room as well as the control room for convenient remote adjustment of the different measurement depths.



WP1D – motorized waterphantom with interface to CU500E or to MCU

The WP1D motorized waterphantom is connected to the CU500E or the MCU control device of the Acrylic/Blue Phantom or RFA-300 waterphantoms respectively for motorized adjustment of the measurement depth. This version enables both depth scans for beam characterization as well as discrete individual positioning of the detector for measurements at the reference depths¹⁾. (without picture)

Accessories for the WP1D

Apart from an optional lead filter for photon beam quality determination above 10 MV according to the TG-51 protocol, different detector holders for cylindrical and parallel plate chambers are available. Another option is a three point levelling plate for easy adjustment and carrying of the WP1D.



Technical specifications

Small one dimensional waterphantom WP1D

	General WP1D Mechanics:
Wall material:	PMMA
Tank size (LxWxH):	40 x 34 x 35 cm ³ (inner dimensions) 42 x 36 x 36 cm ³ (outer dimensions)
Volume:	= 45 litres
Wall thickness:	10 mm
Draining hose:	included
Scanning mechanics:	Aluminium precision linear drive
Chamber support:	Carbon fibre reinforced plastic
Max.vertical scan range:	25 cm

	Manual Version:
Position indicator:	Incremental encoder with display, battery operated
Battery lifetime:	= 10 years (lithium cell)
Position resolution:	0.1 mm
Position accuracy:	± 0.2 mm
Position reproducibility:	± 0.1 mm
Mechanical drift:	Negligible due to self-locking hand crank
Weight:	11 kg

	Motorized Version
	with SCU or Interface to CU500E or to MCU:
Positioning:	DC motor with 10-turn high precision potentiometer
Remote control:	Smart Control Unit, Scanditronix RFA and Wellhöfer Blue WP
Position resolution:	0.1 mm
Position accuracy:	± 0.4 mm
Position reproducibility:	± 0.1 mm
Mechanical drift:	Negligible; closed servo loop
Weight:	12 kg