

Scanditronix Wellhöfer offers a full range of ionization chambers and pSi semiconductor detectors for various 2D and 3D water phantom systems. All detectors are from our in-house production and have been extensively tested to meet the highest criteria in radiotherapy dosimetry.

Air Ionization Chambers

Compact Chambers

Applications

All compact chambers are designed for measurements with high reproducibility in air, in solid or in water phantoms. They are suitable for relative dosimetry of photon, electron and proton fields in radiotherapy.



CC01

CC01 and CC04

CC01 and CC04 are the conventional ionization chambers for measurements of small fields and of ranges with high dose gradients, e.g. stereotactic fields.



CC04

CC08

CC08 is used for customized applications during manufacturing and installation of linear accelerators (e.g. "Buddelship").



CC08 / CC13

CC13

CC13 is the standard chamber for clinical use in water phantoms and for output factor measurements.

CC25

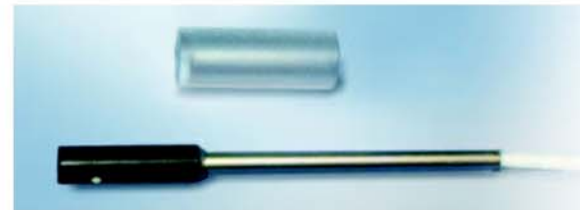
CC25 is mainly used for quality assurance in air and for low dose measurements in water phantoms.



CC25

RK chamber

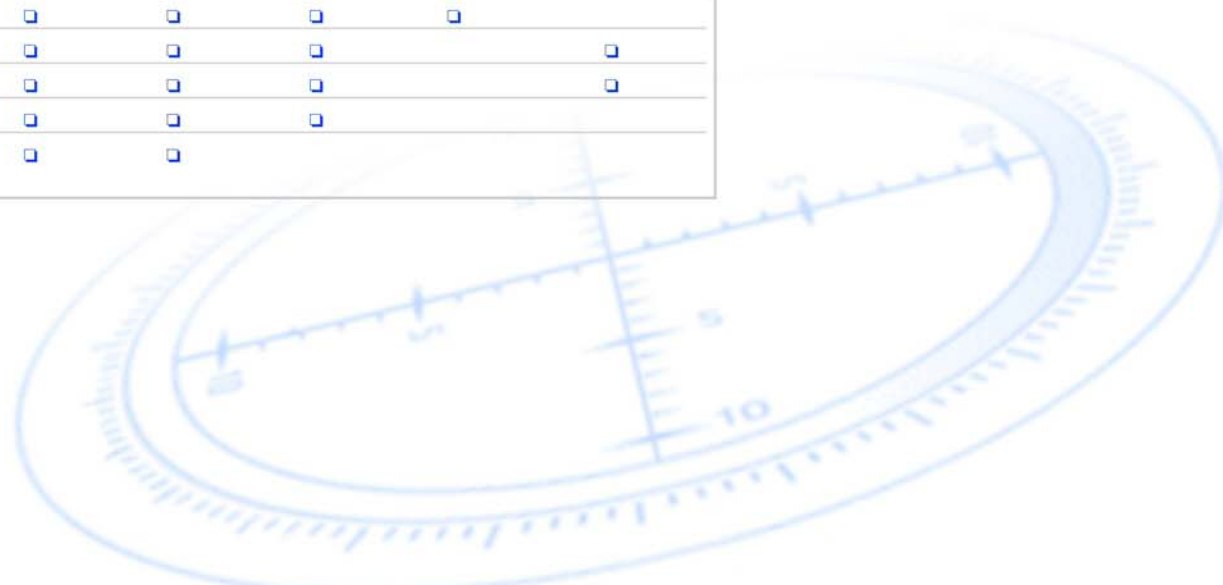
The RK chamber is suitable for relative dosimetry of photon and electron fields, especially for high dose gradients (penumbras).



RK

Features

	Waterproof	Vented through waterproof sleeve	Fully guarded	High uniform spatial resolution	Used for radial and axial beam incidence
CC01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CC04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CC08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
CC13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
CC25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
RK	<input type="checkbox"/>	<input type="checkbox"/>			



Air Ionization Chambers

Farmer Type Chambers

Applications

All farmer type chambers are designed for measurements with high reproducibility in air, in solid or in water phantoms. They are suitable for absolute dosimetry of photon, electron and proton beams in radiotherapy.



FC65-G

FC65-G

FC65-G is the standard reference detector for reference dosimetry and scientific applications.



FC65-P

FC65-P

FC65-P can be used for all routine applications.



FC23-C

FC23-C

FC23-C yields higher precision in measuring of isodose contours.

Features

	Waterproof	Vented through water-proof sleeve	Fully guarded	Wall material	Robust plastic construction for daily beam check	Higher spatial resolution
FC65-G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Graphite		
FC65-P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	POM	<input type="checkbox"/>	
FC23-C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C552	<input type="checkbox"/>	<input type="checkbox"/>

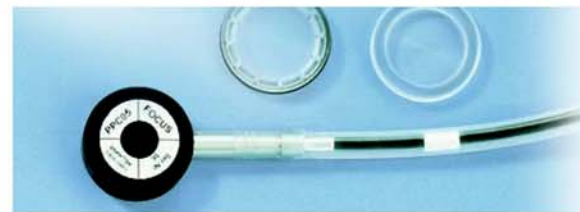
Plane Parallel Chambers

Applications

All plane parallel chambers are designed for measurements with high reproducibility in air, in solid or in water phantoms.

PPC05 and PPC40

PPC05 and PPC40 are suitable for absolute dosimetry of electron, photon and proton beams in radiotherapy.



PPC05



PPC40

NACP

The NACP is designed according to recommendations of the Nordic Association of Clinical Physicists (NACP), Acta Radiologica Oncology 19,55. The chamber is used for absolute dosimetry of electron beams 2-50 MeV. A thinner front wall minimizes contamination of the beam and allows measurements at shallow depth and high accuracy even at low electron energies is guaranteed.



NACP

Features

	Waterproof	Vented through water-proof sleeve	Fully guarded	Higher spatial resolution (depth dose)	Superior physics characteristics: - stabilization time after polarity change approx. 30 s - polarity effect < 1% for all usable energies, field sizes and depths at linear accelerators	Low polarity effect
PPC05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
PPC40	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
NACP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>

Technical specifications

Compact Chambers

	Cavity volume (cm ³)	Cavity length (mm)	Cavity radius (mm)	Wall material	Wall thickness (g*cm ⁻²)	Build-up cap material ¹	Build-up cap (¹³ C) thickness (g*cm ⁻²)	Central electrode material	Water-proof
CC01	0.01	3.6	1.0	C552	0.088	PMMA	0.357	Steel	Y
CC04	0.04	3.6	2.0	C552	0.070	PMMA	0.357	C552	Y
CC08	0.08	4.0	3.0	C552	0.070	PMMA	0.357	C552	Y
CC13	0.13	5.8	3.0	C552	0.070	PMMA	0.357	C552	Y
CC25	0.25	10.0	3.0	C552	0.070	PMMA	0.357	C552	Y
RK	0.12	10.0	2.0	PMMA/ Graphite	0.190	PMMA	0.240	Epoxy/ Graphite	Y

Farmer Type Chambers

	Cavity volume (cm ³)	Cavity length (mm)	Cavity radius (mm)	Wall material	Wall thickness (g*cm ⁻²)	Build-up cap material	Build-up cap (¹³ C) thickness (g*cm ⁻²)	Central electrode material	Water-proof
FC65-G	0.65	23.1	3.1	Graphite	0.073	POM ²	0.560	Aluminium	Y
FC65-P	0.65	23.1	3.1	POM ²	0.057	POM ²	0.560	Aluminium	Y
FC23-C	0.23	8.8	3.1	C552	0.070	POM ²	0.560	C552	Y

Plane Parallel Chambers

	Materials	Window thickness (mg/cm ²)/ (mm)	Active volume (cm ³)	Electrode spacing (mm)	Collecting electrode diameter (mm)	Guard ring width (mm)	Recommended phantom material	Water-proof
PPC05	Window and body C552; graphited (PEEK) electrode	176 / 1	0.05	0.5	10	3.5	Water, RW3, PMMA	Y
PPC40	PMMA	118 / 1	0.40	2.0	16	4.0	Water, RW3, PMMA	Y
NACP	Mylar foile and graphite window; body PMMA; electrode graphited	104 / 0.6	0.16	2.0	10	3.0	Water, RW3, PMMA	Y

Technical data is subject to change without prior notice.

¹ CC-Chambers: standard material of build-up caps is PMMA, other materials on request.

² Poly Oxy Methylene (CH₂O). A trade name is Delrin.