

StarTrack* | MatriXX

Accuracy & Detector Flexibility for Advanced Machine QA

IBA OFFERS THE CHOICE between two high-end ionization chamber based detectors for reliable measurements and Machine QA with **myQA Machines**^{1,3)}

- Automatic k(t,p) correction
- All main parameters in just one measurement
- Patented energy verification method (optional)
- Tabletop or gantry mount (optional)

StarTrack*

Optimized detector layout dedicated to verify main QA

- 453 air vented pixel ionization chambers with optimized geometry for Machine QA
- Parallel readout from independent electrometers



MatriXX²⁾

Versatile and proven for **Machine QA and Plan Verification**²⁾ in one workflow

- Workflow efficiency by combining Plan Verification & Machine QA at the same time, same setup
- Versatile and proven in over 1200 clinical installations
- High-resolution 1020 air vented pixel ionization chambers
- Parallel readout from independent electrometers

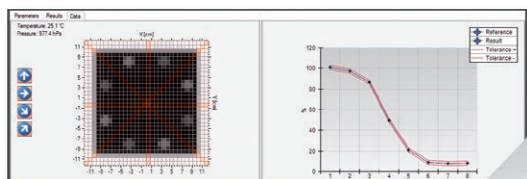


SEAMLESS ENERGY CONSTANCY VERIFICATION PLATES

A verification plate is placed on the detector for verification of the beam quality consistency. Measurements of all desired beam energies can be performed without the need of entering the treatment room.

myQA Machines^{1,3)} automatically compares the measurement sets of each energy with the corresponding set of reference values. Then a test report is created according to the chosen pass/fail criteria together with the reference values.

The energy constancy verification plates can be used with electron beams from 4 to 22 MeV and photon beams of any energy from Co60 to 25 MV.



GANTRY HOLDERS AND BUILD-UP PLATES

Easy to attach gantry holders enable precise and rigid mounting of the StarTrack* or MatriXX detector as well as various build-up plates to the gantry head of all Linac types.



¹⁾ myQA Machines³⁾ is optimized to work with either StarTrack*, I'mRT-MatriXX or MatriXX EVOLUTION

²⁾ With myQA Patients³⁾

³⁾ myQA is pending release
Currently not available for sale in the USA

TECHNICAL SPECIFICATIONS

	StarTrack*	i'mRT-MatriXX, MatriXX ^{Evolution}
Application:	routine QA of high energy photon and electron beams	machine QA, static and dynamic measurements of MU's, dose distributions and leaf positions; IMRT patient-specific plan verification
Positioning:	gantry mount (holder optional) or patient table	
Measuring quantity:	absorbed dose, dose rate	
Energy range:	Co60, 6 MV-18 MV photons, 6 MeV-18 MeV electrons	
Intrinsic build-up:	3 mm Tecaran ABS; density 1.06 g/cm ³	
Backscatter material:	RW3, (composition: 98% Polystyrol + 2% TiO ₂ and density: 1.045 g/cm ³); thickness 22 mm	
Dose linearity:	0.5% from 10 cGy to 5 Gy integral dose 0.5% from 0.1 Gy/min up to 4 Gy/min dose rate	
Output factor:	within 1% from 5 cm x 5 cm to 25 cm x 25 cm field size compared to CC13 between 6 and 18 MV	within 1% from 5 cm x 5 cm to 24 cm x 24 cm field size compared to CC08 between 6 and 18 MV
Resolution (dose and dose rate):	0.5 mGy resp. 0.5 mGy/min	
k(t,p) correction:	temperature (10-40 °C), pressure (70-110 kPa)	
Dimensions:	56 cm (L) x 6 cm (H) x 32 cm (W)	56 cm (L) x 6 cm (H) x 32 cm (W)
Weight:	≈10 kg	≈10 kg
Power supply:	100-240 V, 50/60 Hz, power cord with US or German power plug included	
Interface to PC:	Ethernet RJ-45 (direct connection or via network)	
Number of chambers:	453	1020
Active area:	27 cm x 27 cm, measuring field sizes up to 25 cm x 25 cm	24.4 x 24.4 cm ²
Sensor layout:	chamber arrays organized along main axes and diagonals, 8 additional chambers for energy constancy check	matrix in a plane arranged in a 32 x 32 grid
Spatial resolution:	5 mm for horizontal and vertical lines, 7 mm for diagonals	7.62 mm center-to-center
Chamber type:	vented pixel ionization chambers	
Chamber size:	cylindrical, 3 (O) x 5 (h) mm, sensitive volume 0.035 cm ³	4.5 (O) x 5 (h) mm, chamber volume 0.08 cm ³
Typical sensitivity:	1.1 nC/Gy (Co60)	2.4 nC/Gy
Effective point of measurement:	3 mm below top surface	
Energy verification:	one build-up plate each for photon and electron energies (optional)	
Electrometer:	8 TERA ASICs (each contains 64 independent electrometers)	16 TERA ASICs (each contains 64 independent electrometers)
Charge resolution:	0.1 pC/count	
Sampling time:	min. 10 ms	min. 20 ms
Readout:	parallel and synchronous readout with no dead time	

Technical data is subject to change without prior notice.

Depicted product images and specifications may differ from the actual scope of delivery.

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