# Star*Track*\* | 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 *my* QA<sup>Machines 1.3)</sup>

- ► 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

# MatriXX<sup>2)</sup>

Versatile and proven for Machine QA and Plan Verification<sup>2)</sup> 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

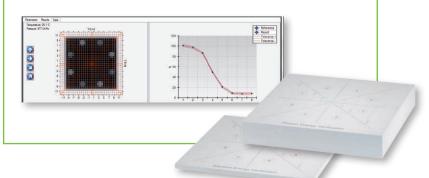
A verification plate is placed on the detector for verification of the beam quality consistency. Measurements of all desired beam energies can be performed without the need of entering the treatment room.

16a

tarTrack

**Machines**<sup>1,3)</sup> 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 Star*Track\** or MatiXX detector as well as various build-up plates to the gantry head of all Linac types.

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- <sup>1)</sup> *my*QA Machines<sup>3)</sup> is optimized to work with either Star*Track\**, I'm*RT*-MatriXX or MatriXX <sup>EVOLUTION</sup>
- <sup>2)</sup> With *my*QA Patients<sup>3)</sup>
- <sup>3)</sup> *my*QA is pending release Currently not available for sale in the USA

# **TECHNICAL SPECIFICATIONS**

thickness 22 mm         Dose linearity:       0.5% from 10 cGy to 5 Gy int         0.5% from 0.1 Gy/min up to 4         Output factor:       within 1% from 5 cm x 5 cm till         25 cm x 25 cm field size com         CC13 between 6 and 18 MV         Resolution         (dose and dose rate):         k(t,p) correction:         temperature (10-40 °C), press         Dimensions:       56 cm (L) x 6 cm (H) x 32 cm         Weight:       ≈10 kg         Power supply:       100-240 V, 50/60 Hz, power cc         Interface to PC:       Ethernet RJ-45 (direct conner         Number of chambers:       453         Active area:       27 cm x 27 cm, measuring fir         up to 25 cm x 25 cm       sensor layout:         chamber store energy constar       5 mm for horizontal and vertior         7 mm for diagonals       vented pixel ionization chamb         chamber size:       cylindrical, 3 (O) x 5 (h) mm, sensitive volume 0.035 cm <sup>3</sup> Typical sensitivity:       1.1 nC/Gy (Co60)	measurements of MU's, dose distributions and leaf positions; IMRT patient-specific plan verification or patient table MeV-18 MeV electrons .06 g/cm <sup>3</sup> styrol + 2% TiO <sub>2</sub> and density: 1.045 g/cm <sup>3</sup> ); egral dose Gy/min dose rate within 1% from 5 cm x 5 cm to
Positioning:       gantry mount (holder optional),         Measuring quantity:       absorbed dose, dose rate         Energy range:       Co60, 6 MV-18 MV photons, 6         Intrinsic build-up:       3 mm Tecaran ABS; density 1         Backscatter material:       RW3, (composition: 98% Poly thickness 22 mm         Dose linearity:       0.5% from 10 cGy to 5 Gy int 0.5% from 0.1 Gy/min up to 4         Output factor:       within 1% from 5 cm x 5 cm t 25 cm x 25 cm field size com CC13 between 6 and 18 MV         Resolution       (dose and dose rate):         k(t,p) correction:       temperature (10-40 °C), press         Dimensions:       56 cm (L) x 6 cm (H) x 32 cm         Power supply:       100-240 V, 50/60 Hz, power of         Interface to PC:       Ethernet RJ-45 (direct conner         Number of chambers:       453         Active area:       27 cm x 27 cm, measuring fe         up to 25 cm x 25 cm       seas and diagonals, 8 additio chambers for energy constar         Spatial resolution:       5 mm for horizontal and vertio 7 mm for diagonals         Chamber type:       vented pixel ionization chamb         chamber size:       cylindrical, 3 (O) x 5 (h) mm, sensitive volume 0.035 cm <sup>3</sup> Typical sensitivity:       1.1 nC/Gy (Co60)	dose distributions and leaf positions; IMRT patient-specific plan verification or patient table MeV-18 MeV electrons .06 g/cm <sup>3</sup> styrol + 2% TiO <sub>2</sub> and density: 1.045 g/cm <sup>3</sup> ); egral dose Gy/min dose rate o within 1% from 5 cm x 5 cm to pared to 24 cm x 24 cm field size compared
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Dimensions:       56 cm (L) x 6 cm (H) x 32 cm         Weight:       ≈10 kg         Power supply:       100-240 V, 50/60 Hz, power cm         Interface to PC:       Ethernet RJ-45 (direct conner         Number of chambers:       453         Active area:       27 cm x 27 cm, measuring fie         up to 25 cm x 25 cm       Sensor layout:         chamber arrays organized all       axes and diagonals, 8 additio         chambers for energy constar       5 mm for horizontal and vertio         7 mm for diagonals       cylindrical, 3 (O) x 5 (h) mm,         cylindrical, 3 (O) x 5 (h) mm,       sensitive volume 0.035 cm <sup>3</sup> Typical sensitivity:       1.1 nC/Gy (Co60)	
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Typical sensitivity:1.1 nC/Gy (Co60)Effective point of	ers
Effective point of	ers 4.5 (O) x 5 (h) mm,
· · · · · · · · · · · · · · · · · · ·	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm³
measurement: 3 mm below top surface	ers 4.5 (O) x 5 (h) mm,
	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm³
Electrometer: 8 TERA ASICs (each contains	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm <sup>3</sup> 2.4 nC/Gy
64 independent electrometer	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm <sup>3</sup> 2.4 nC/Gy
Charge resolution: 0.1 pC/count	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm <sup>3</sup> 2.4 nC/Gy noton and electron energies (optional) 16 TERA ASICs (each contains
Sampling time: min. 10 ms	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm <sup>3</sup> 2.4 nC/Gy noton and electron energies (optional) 16 TERA ASICs (each contains s) 64 independent electrometers)
<b>Readout:</b> parallel and synchronous rea	ers 4.5 (O) x 5 (h) mm, chamber volume 0.08 cm <sup>3</sup> 2.4 nC/Gy noton and electron energies (optional) 16 TERA ASICs (each contains

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