

ALL COLORS OF INNOVATION



**HIGH PRECISION
PARTICLE DETECTORS
TAILORED TO YOUR NEEDS**

DETECTOR
DEVICES AND TECHNOLOGIES TORINO

A NEW HANDY WAY TO IMPROVE YOUR PARTICLE THERAPY QA

NEXT Q

- ✓ **WHAT?**
NextQ is the unique beam profile measurement device in its new smart and catchy design. It is the new all-in-one device, designed to be both light and robust with its aluminium case.
- ✓ **WHERE?**
NextQ is conceived to be placed at the isocentre and measure all the principal beam parameters: position, shape and intensity. It can be placed facing horizontal line or laid down for vertical lines.
- ✓ **WHEN?**
NextQ is perfect both for QA procedures and beam characterization tests. It allows for the acquisition of the beam parameters with one single beam shot. Thanks to its new fixing holes, nextQ is suitable to be mounted at the isocentre on every docking station or even on gantry mechanical support.

All-in-one and accurate device to speed up your QA procedures

- ✓ **WHO?**
NextQ is aimed at all medical and accelerator physicists who require a fast, reliable, compact device. It is ideal for pencil beams of protons and carbon ions, thanks to its high resolution spot measurements.
- ✓ **HOW?**
NextQ is composed by X and Y strip ionization chambers to measure the beam profiles and two integral chambers for redundant particle flux measurements. It is very easy and fast to set up.
- ✓ **WHY?**
NextQ is the new all-in-one device that includes dedicated software, power supply and electronic interfaces inside the detector. These features guarantee both a better signal to noise ratio and a more comfortable set up. It is a unique device in the market. It is precise, fast and handy to check beam parameters in particle therapy.

Ideal for scanned beams and beam characterization tests

TYPE OF DETECTOR	Air vented ionization chamber
NUMBER OF CHANNELS	127 X strips and 127 Y strips + 2 integrals
TOTAL SENSITIVE AREA	127 mm x 127 mm
CHAMBER AIR GAP	2 mm
PITCH	1 mm
INTERPOLATED RESOLUTION	0.1 mm
REPEATABILITY	>99%
MAXIMUM RAW DATA ACQUISITION RATE	1 kHz (parallel read-out of all the channels)
DATA COMMUNICATION	Ethernet TCP/IP
EXTERNAL DIMENSIONS	436 x 427 x 83 mm ³
WEIGHT	8 kg