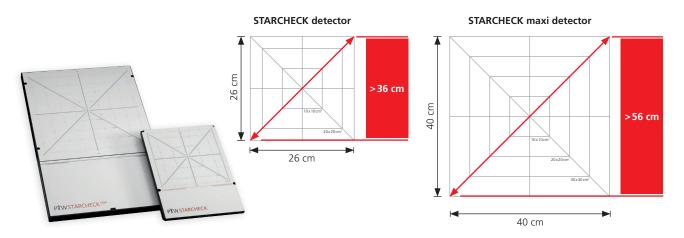


Measuring fields larger than 30 cm with the STARCHECK detector

Water tank measurements can be very time consuming even if you simply want to check if all linac parameters are still correct. With the appropriate detector, this process can be accelerated. For precise, real-time beam scanning, PTW offers two devices: the STARCHECK detector with a field size of $26 \times 26 \text{ cm}^2$ and the STARCHECK maxi detector with a field size of $40 \times 40 \text{ cm}^2$. Both detectors have the high resolution of 3 mm on the main axes and the diagonals.

If you need to measure large fields up to 40 x 40 cm², we recommend using the STARCHECK maxi. If you only have smaller fields, the STARCHECK detector can be used for field sizes up to 26 cm in the normal orientation. However, the diagonals of the STARCHECK detector have a length of more than 36 cm and, for the STARCHECK maxi, the length is more than 56 cm.



This means that if you need to measure profiles for field sizes larger than your STARCHECK detector, an easy rotation of the collimator or the detector will help. We recommend using a normal detector alignment on the couch using the room lasers and then rotating the collimator. A 45° collimator rotation will be sufficient to have the correct alignment to measure a field with the length of the detector diagonal. If you do not want to change the linac parameters, it is also possible to perform a 45° rotation of the STARCHECK device on the couch.

