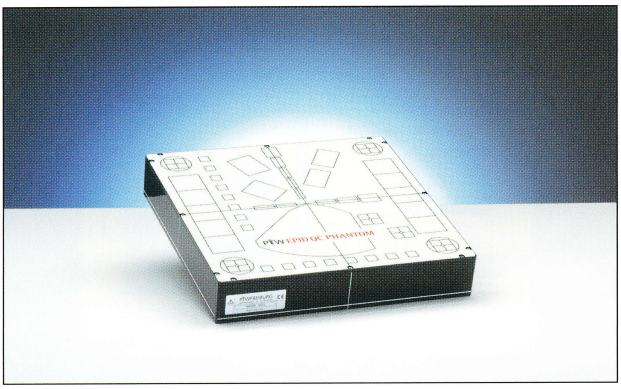
EPID QC PHANTOM



Test object for quality control of Electronic Portal Imaging Devices used in high-energy photon beams

Features

- Suitable for conventional EPIDs and flat Panel Imagers
- Checks linearity, isotropy, noise, low and high contrast resolution with test elements in focal spot geometry
- High contrast resolution in horizontal, vertical and diagonal direction
- Measurement of all parameters with a single beam in one image

Electronic Portal Imaging Devices (EPID) are used in radiation therapy to verify the patient's position in the radiation beam during treatment. EPIDs are intended to detect physiological structures of the patient and to refer to them to the photon beam's coordinate system. Regular quality checks of the EPIDs are therefore crucial to ensure constant image quality and thus a high safety level for the patient.

The EPID QC PHANTOM[1] is easy to use. Baseline images and subsequent test images are taken by irradiating the phantom with a suitable dose, depending on the type of EPID. The phantom includes test elements for all relevant parameters for a complete quality control procedure measured in a single beam. It checks linearity, isotropy, noise, low and high contrast resolution in a focal spot geometry. The phantom includes a wide range of high-contrast test patterns to perform tests even of the most advanced EPIDs available.

Due to horizontal and vertical resolution in one beam, the focal spot size can be controlled with flat panel imagers. An optimized 'Las Vegas' like phantom is included for low contrast analysis which enables service personnel to adjust EPID brightness and contrast using well-established procedures.

[1] The EPID QC PHANTOM was designed by Schmidt, Decker, Winkes, Rittler, Kretner and Herbig, Westpfalzklinikum Kaiserslautern, Germany

Ordering Information

T42025 EPID QC PHANTOM