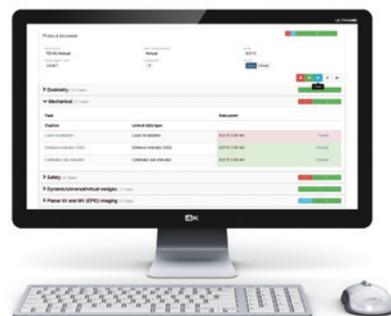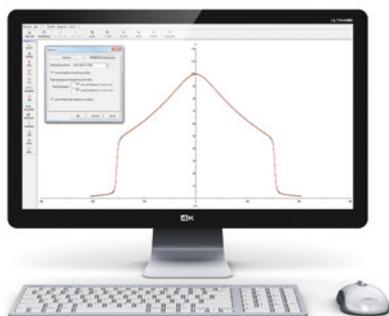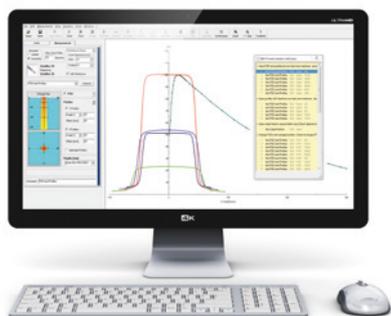# BEAMSCAN™

Software Feature Overview

Setup and Configuration

▶ Reduce setup time with BEAMSCAN™ Wireless Auto Setup.
▶ Customize or create new task lists to automate beam data collection.
▶ Set or adjust optimal scanning speed and resolution.
▶ Access and effectively manage all detectors and treatment machines from one single location.
▶ Create or customize dosimetry protocols.
▶ Change colors, fonts or styles as needed.

Beam Data Acquisition

▶ Select a TPS-specific task list for automatic beam data collection.
▶ Use the fast scanning mode to cut scan time.
▶ Choose from a variety of measurement programs, including TPR/TMR, output factors for any field size or geometry, wedge/tray factors, isodose distributions in different depths or absolute dose.
▶ Measure very large beam profiles without tank shift.
▶ Overlay a reference curve on a running measurement for online comparison.
▶ Check and adjust the beam in real-time.
▶ Check and adjust the water level for efficient evaporation control.
▶ Automatically calculate measurement depth of profiles based on nominal d_{max} or % PDD value.
▶ Repeat a previous measurement at any time with one click.

Data Processing

▶ Smooth or average data to remove unwanted noise.
▶ Merge half beam profiles.
▶ Mirror profiles to correct coordinate system or asymmetry.
▶ Add profiles and PDDs for comparison.
▶ Shift profiles or PDDs along depth axis to correct measurement depths.
▶ Correct CAX of FFF profiles based on user-defined penumbra values.
▶ Convert measured ionization curves to absorbed dose to water curves based on international protocols or user-defined R_{50} value.
▶ Normalize data to CAX, a specific point or absolute value.
▶ Create correction tables for depth- or dose-related corrections.

Beam Data Analysis

▶ Evaluate FFF beam profiles.
▶ Analyze beam data according to international or vendor-specific dosimetry protocols.
▶ Compare scans using 1D Gamma comparison or percentage deviation.
▶ Generate tables for TPR/TMR, OCR and output factors.
▶ Display, analyze and edit output factors in a 1D or 2D table.
▶ Select single scans for detailed analysis.
▶ Superimpose scans for a quick visual symmetry check.
▶ Calculate TPR/TMR from depth dose measurements.
▶ Determine absorbed dose to water according to IAEA TRS-398 or AAPM TG-51 (optional).
▶ Convert imported scanned or digital images for comparison or quantitative analysis (optional).

Data Handling and Export

▶ Format your beam data for easy import into your TPS.
▶ Export your analyzed beam data to Track-it for trending and reporting.
▶ Copy and paste selected data points or entire data tables to Excel, ASCII, etc.
▶ Customize your printouts with the Print Designer.
▶ Print to PDF for archiving and sharing.

Track-it Trending and Reporting

▶ Access your analyzed beam data from anywhere in your network, using a standard web browser.
▶ Track the current status of your QA tasks (open, skip, pass or fail).
▶ Use predefined or custom protocol templates, e.g. AAPM TG-142 Annual QA, to document results as legally required – in a fraction of time.
▶ Update your QA reports automatically with AutoFill.
▶ Complete reports offline and synchronize when back online.
▶ Add attachments to protocol templates to provide guidance on test procedures.
▶ Schedule QA tasks on specific days of the week.
▶ View and manage all QA reports conveniently in the Track-it Dashboard.
▶ Show trends of selected data to track performance changes over time.

For more information on BEAMSCAN™, visit www.beamscan.de or contact us at info@ptw.de.

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