

SunCHECK™ Machine

Comprehensive Machine QA

The screenshot displays the SunCHECK software interface, which is used for comprehensive machine quality assurance. The interface is divided into several panels:

- Left Panel:** A navigation sidebar with icons for Home, Task, and Sub. A message states "Your QA Template is currently empty." Below this, there are sections for "Standard Templates" (listing TG-142, IMRT, and SNC Routine) and "My Templates".
- Top Panel:** A "Monthly" configuration window for "TrueBeam01 / Monthly". It shows a list of measurement items under "Monthly (TG-142)", including "Photon constancy with quad wedges (ICP)", "Electron constancy with quad wedges (ICP)", "Photon beam profile constancy", and "Electron beam profile constancy".
- Right Panel:** A "Daily" configuration window for "LINACB / Daily". It shows a list of measurement items under "Daily (TG-142)", including "Photon output constancy", "Electron output constancy", "Laser localization", and "Optical distance indicator (ODI) at isocenter".
- Bottom Panel:** A detailed view of a measurement titled "DIN 6847-5 (2013) - 7.4 Dose monitoring system: Dependency of the CALIBRATION FACTORS on the GANTRY rotation angle". It shows a table of measurements and a "Baseline" table.

USE	PARAMETER	EXPECTED	TOLERANCE
<input type="checkbox"/>	Output Relative Dose [Measurement 1 (Normalization Measurement)]	96.4	±0.4
<input type="checkbox"/>	Output Relative Dose [Measurement 2]	96.4	±0.4
<input type="checkbox"/>	Output Relative Dose [Measurement 3]	96.4	±0.4
<input type="checkbox"/>	Output Relative Dose [Measurement 4]	96.4	±0.4
<input checked="" type="checkbox"/>	Gantry Angle 1, Output Variation from Reference	1	±0.4
<input checked="" type="checkbox"/>	Gantry Angle 2, Output Variation from Reference	1	±0.4
<input checked="" type="checkbox"/>	Gantry Angle 3, Output Variation from Reference	1	±0.4
<input checked="" type="checkbox"/>	Gantry Angle 4, Output Variation from Reference	1	±0.4



Drive Efficiency and Consistency

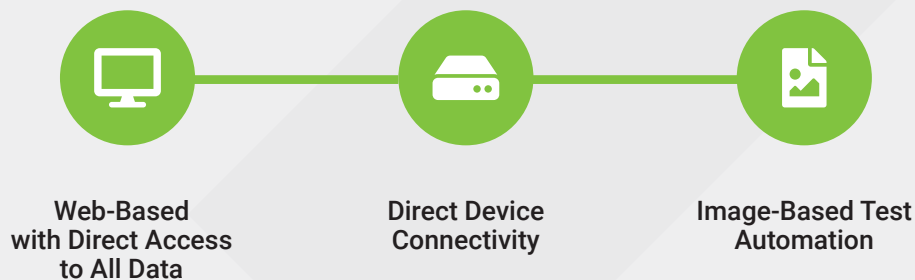
SunCHECK™ Machine integrates all your Machine QA needs – from Daily Output checks to Annual QA tasks, and everything in between.

Through a single web-based software application, all data and results are stored in the central SunCHECK database. With direct device connectivity and control.

One point of access to Machine QA data, protocols and operation provides visibility for all stakeholders, with easy verification that your QA tasks are on-time and complete.

“To ensure patient safety, completion and results of on-time QA must be easy to locate and interpret.”

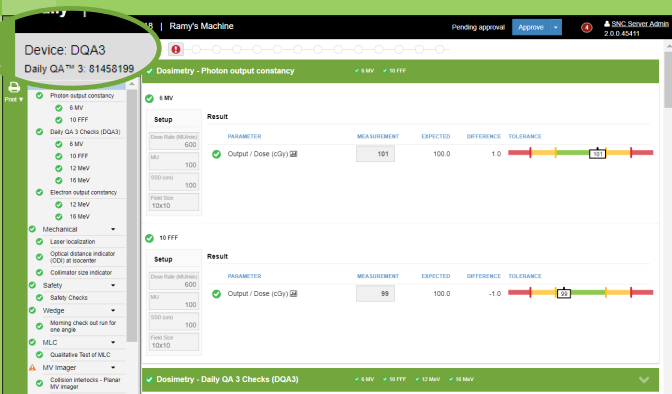
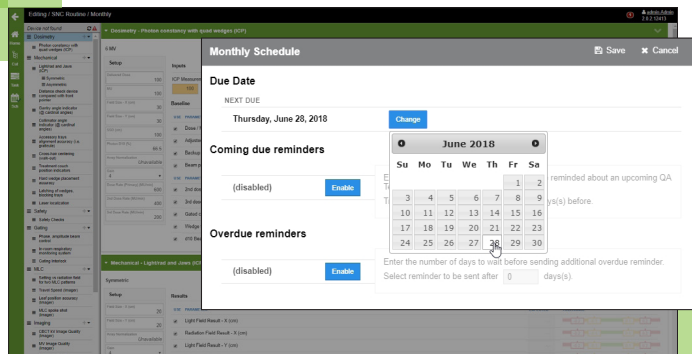
Source: AAPM TG-142





Daily, Monthly, Annual QA

Ensure standardization among clinics and machines with shared tolerances. Apply ready-to-use, but customizable templates for efficient QA. No more spreadsheets!

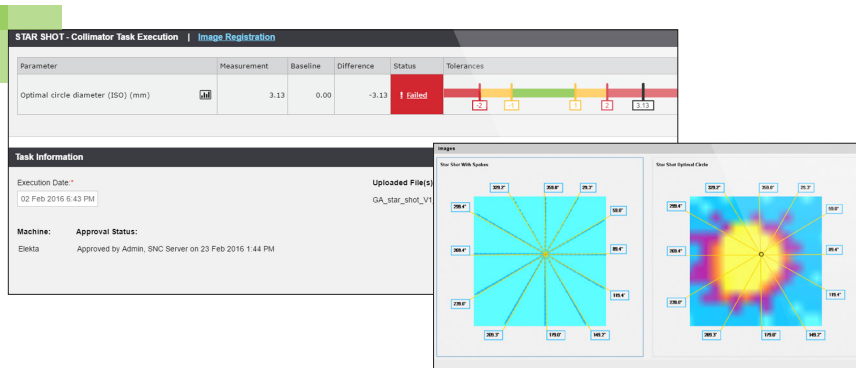


Direct Device Connectivity

Automate beam measurement with direct device integration to Sun Nuclear's Daily QA™ 3, IC PROFILER™ and IC PROFILER™- MR. Eliminate the need for additional software and transfer of data. Complete your entire TG-142 and DIN QA easily within SunCHECK.

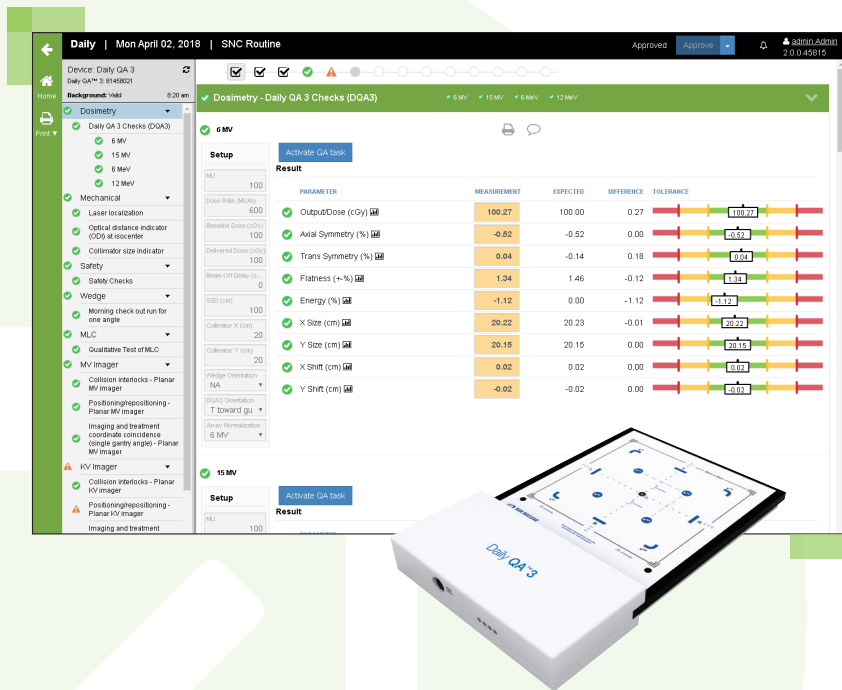
Imaging, MLC and VMAT QA*

Simply deliver test beams. The acquired image or log file data is automatically processed and analyzed. Results are presented clearly, and immediately. Plus, the phantoms you most commonly use are seamlessly supported.



* Available as distinct module: SNC Machine™

Integrated Machine QA in Action



Daily QA

Included templates provide out-of-the-box coverage of all your Daily QA needs. Simply connect your Daily QA 3 device for automated data collection – no transfer of information needed! Templates are provided by modality and are easily customized to fit your needs.

The SunCHECK Dashboard: Focus on What's Next

A single view presents all Machine and Patient-focused QA. Quickly select the task you need to complete your TG-142, DIN, or other Daily, Monthly and Annual QA protocols..

DATE	MACHINE	TEMPLATE	STATE	ACTIONS
02 APR 2018	SNC Routine	Monthly	April In Process	***
04 APR 2018	GE Lightspeed	Daily		***
04 APR 2018	HDR	Daily		***
04 APR 2018	SNC Routine	Daily		***
04 APR 2018	Tomotherapy	Daily		***

DATE	MACHINE	TEMPLATE	STATE	ACTIONS
03 APR 2018	HDR	Daily	Completed	***
03 APR 2018	GE Lightspeed	Daily	Completed	***
04 APR 2018	Tomotherapy	Daily	Completed	***

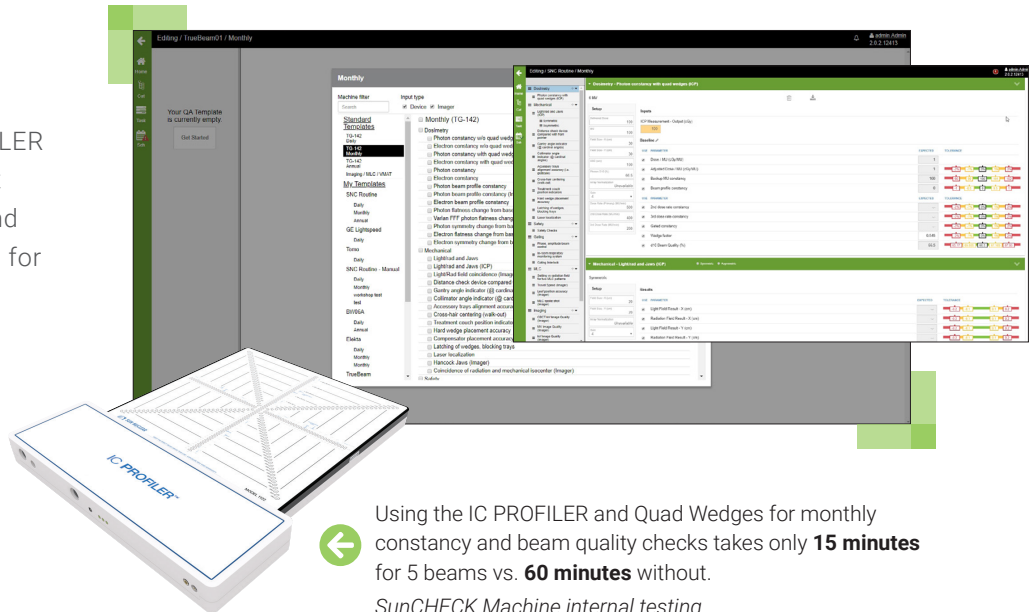
DATE	MACHINE	TEMPLATE	STATE	ACTIONS
02 APR 2018	SNC Routine	Daily	Completed	***

Out of tolerance Requires review Approved

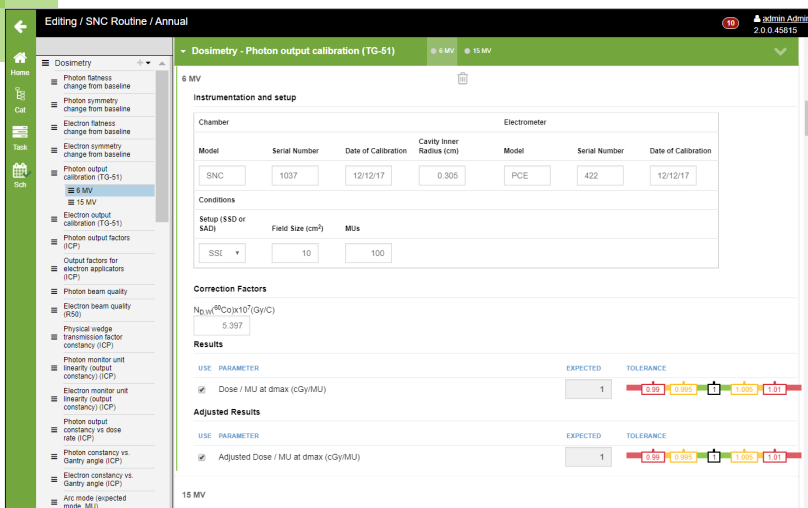


Monthly QA

Directly connect your IC PROFILER and take advantage of efficient templates for easy Monthly (and Annual) QA. Image-based tests for Imaging and MLC QA, plus VMAT QA, are included. Simply deliver the test beam, then accept or reject results on your terms and timeframe.



Using the IC PROFILER and Quad Wedges for monthly constancy and beam quality checks takes only **15 minutes** for 5 beams vs. **60 minutes** without. *SunCHECK Machine internal testing*



Annual QA

Pre-built templates allow you to execute your Annual QA protocols with flexibility. Your data is automatically saved, and you can keep a machine's Annual QA template "In Progress" over a period of time. Just mark it "Complete" when done.

SunCHECK:

Proactive Machine Analysis

With SunCHECK Machine, get ahead of your team's machine management and compliance needs.

- Data trending tracks parameters approaching out-of-tolerance levels
- Centralized storage makes report retrieval easy
- Report templates demonstrate compliance with accreditation bodies

The end result is increased confidence, and streamlined compliance with your reporting and accreditation requirements.

“A lot of the analysis we do on things like CatPHANs, picket fences, and VMAT QA, was being done manually – manually drawing on regions of interest and entering in results. Getting rid of that process with SunCHECK Machine resulted in huge time-savings from the start.”

*Greg Martin, M.Sc.,
Senior Clinical Scientist
Clatterbridge Cancer Centre*

INDEPENDENT QA. YOUR WAY.

The SunCHECK Platform provides flexible workflow automation for integrated and independent QA.

Combine SunCHECK Machine with SunCHECK Patient to realize the full power of the platform.

- One Solution for Radiation Therapy QA
- Speed and Efficiency through Automation
- Access from Anywhere
- Seamless Clinical Integration



Learn more: sunnuclear.com/suncheck

SunCHECK Machine Specifications



Supported Tasks and Tests


Protocol Support:	TG- 142 (Includes all 127 tasks defined in tables 1-6), TG-51, DIN, and others through custom templates, tasks and reports
Imaging:	Imaging, MLC, VMAT, CBCT Image Quality, kV Image Quality, MV Image Quality
MLC/Mechanical:	MLC Picket Fence, MLC Positioning & Leaf Speed, Hancock MLC, Winston-Lutz Radiation & Machine Isocenter, Hancock Winston-Lutz, Gantry/Couch/Collimator Starshot, Light/Radiation Congruence
Beam:	Field Size, Beam Flatness, Beam Symmetry
VMAT:	Dose Rate versus Gantry Speed, Leaf Speed, Arc Point Dose, DMLC Point Dose

Connected Sun Nuclear Devices

 Daily QA™ 3:	5 Beam Quality Checks and Real-Time Results
 IC PROFILER™ and IC PROFILER™- MR	Full-Field Measurements of X, Y, Diagonals for Close Dosimetric Match to Water Tanks

Phantom Compatibility

 Sun Nuclear:	MV-QA, kV-QA, FS-QA, WL-QA
 Gammex:	ACR 464 Phantom
Standard Imaging:	PipsPro Phantoms
Phantom Laboratory:	CatPhan 503, 504, 600, 604
Leeds:	TOR 18FG
Varian:	Las Vegas Phantom
PTW:	EPID QC Phantom
GE Medical Systems:	GE Daily Phantom

 See sunnuclear.com for product specifications.

SunCHECK™

Used by 900+
Clinical Sites Worldwide



Platform



Patient



Machine

sunnuclear.com

