

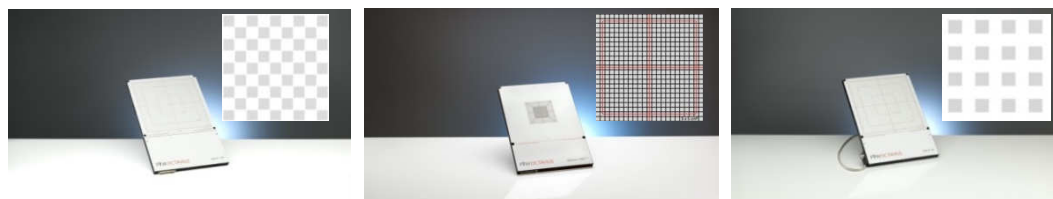
System Overview



OCTAVIUS® System	I	II	III	4D
Description	2D dosimetry system for static gantry patient plan verification	2D dosimetry system for static, dynamic and rotational patient plan verification	2D dosimetry system for patient plan verification and dose delivery QA of multiple techniques	4D dosimetry system for rotational patient plan verification
How it works	Measures the dose in one plane at one or multiple fixed gantry positions (with optional gantry mount).	Measures the composite dose in one plane (coronal or sagittal depending on phantom setup), acquired at different gantry positions.	Measures the composite dose in one plane (coronal or sagittal depending on phantom setup) before treatment and verifies dose delivery during each treatment session ("in vivo") using DAVID® system.	Rotates synchronously with the gantry and measures the dose in the entire volume as a function of time or gantry angle (4D). Allows to analyze the results in all three planes (transversal, sagittal, coronal).
Treatment Techniques				
2D/3D	●	●	●	●
IMRT Step & Shoot	●	●	●	●
IMRT Sliding Window	●	●	●	●
Arc Therapy (RapidArc®, VMAT)	-	●	●	●
Helical TomoTherapy®	-	●	-	-
SRS / SBRT	●	●	●	●
CyberKnife®	●	-	-	-
FF/FFF	●	●	●	●
Supported Detectors				
OCTAVIUS® Detector 1500	●	●	●	●
OCTAVIUS® Detector 1000 ^{SRS}	●	-	-	●
OCTAVIUS® Detector 729	●	●	●	●
2D-ARRAY seven29®	●	●	●	●
Turnkey Solutions				
<i>Including</i>				
OCTAVIUS® Detector 1500	L981449	L981450	L981451	L981438
OCTAVIUS® Detector 1000 ^{SRS}	L981465	-	-	L981429
OCTAVIUS® Detector 729	L981297	L981298	L981229	L981398

● available/supported ○ optional - not available or suitable

Detector Overview



OCTAVIUS [®]	Detector 1500	Detector 1000 ^{SRS}	Detector 729
Characteristics			
Detector technology	Vented plane-parallel ionization chamber	Liquid-filled ionization chamber	Vented plane-parallel ionization chamber
Detector layout	Checkerboard pattern	Square pattern, spaced 2.5 mm apart in center area	Square pattern, spaced 10 mm apart across entire measurement area
No. of detectors	1405	977	729
Detector size	4.4 x 4.4 x 3 mm ³ (0.06 cm ³)	2.3 x 2.3 x 0.5 mm ³ (0.003 cm ³)	5 x 5 x 5 mm ³ (0.125 cm ³)
Detector spacing	7.1 mm center-to-center ¹	2.5 mm center-to-center ²	10 mm center-to-center
Max. field size	27 x 27 cm ²	10 x 10 cm ²	27 x 27 cm ²
Detector field coverage	50%	85% ²	25%
Maximum dose rate	48 Gy/min	36 Gy/min	48 Gy/min
Sampling frequency	100 ms	100 ms	200 ms
Weight / size (WxDxH)	6 kg / 30 x 46.7 x 2.2 cm ³	5.4 kg / 30 x 42 x 2.2 cm ³	5.7 kg / 30 x 42 x 2.2 cm ³
Advantages	<ul style="list-style-type: none"> ✓ Highest detector density ✓ High spatial resolution ✓ Largest field coverage ✓ Checkerboard layout – no MLC leaf undetected ✓ 100% field coverage with two measurements ✓ For large and smaller fields ✓ Wide dose rate range ✓ For use in multiple phantoms 	<ul style="list-style-type: none"> ✓ Smallest detector size ✓ Highest spatial resolution ✓ Full field coverage in center area – for HD-MLC QA ✓ For small fields down to 1 x 1 cm² ✓ Dedicated tools for CyberKnife[®] QA ✓ Wide dose rate range ✓ For use in multiple phantoms 	<ul style="list-style-type: none"> ✓ Large field coverage ✓ Uniform detector spacing – aligned to standard MLC leaf width ✓ 100% field coverage with four measurements³ ✓ For standard IMRT fields ✓ Wide dose rate range ✓ For use in multiple phantoms
Supported Phantoms			
OCTAVIUS [®] 4D phantom	●	●	●
OCTAVIUS [®] phantom	●	-	●
RW3 slab phantoms	●	●	●
Use for	Rotational techniques, small-field IMRT, SRS/SBRT	CyberKnife [®] , SRS/SBRT, small-field IMRT	Standard IMRT, conventional techniques

¹diagonal ²in center area (5 cm x 5 cm) ³Available for OCTAVIUS[®] I and II systems

● supported - not available

Feature Comparison Which system is best suited for which application?	OCTAVIUS [®]			
	I	II	III	4D
Patient-Specific QA				
Field-by-field dose verification	■	■	■	■
Composite dose verification	-	□	□	■
QA of arc deliveries	-	□□ ¹	□□ ¹	■
3D dose verification	-	-	-	■
Dose verification in target plane	□	□	□	■
Dose verification in target volume	-	-	-	■
Dedicated phantom for rotational QA	-	□	□	■
Isotropic detector response	-	□	□	■
Suitable for small fields (≤ 10 x 10 cm ²)	■ ¹	□ ¹	□ ¹	■ ¹
High dose rates	■	■	■	■
Large field size range	■ ¹	■	■	■ ¹
⁶⁰ Co calibration	■	■	■	■
QA of helical deliveries	-	■	-	-
QA of stereotactic deliveries	■ ¹	□ ¹	□ ¹	■ ¹
Key Dose Analysis Tools				
2D/3D Gamma Index (global, local)	●	●	●	●
3D volume analysis (for all slices/planes of dose cube)	-	-	-	●
Assessment of all three planar views	-	-	-	●
Patient-based DVH calculation	-	-	-	●
Patient CT overlay	-	●	●	●
Advanced Capabilities				
Machine-specific QA	○	○	○	○
Suitable for HD-MLC QA	■ ¹	□ ¹	□ ¹	■ ¹
Independent MU checks	○	○	○	○
In vivo verification	○	○	●	○
CyberKnife [®] QA solution	○	-	-	-
Absolute dose measurements ²	⊙	●	●	⊙
Point dose measurements	●	●	●	●
Detectors suitable for use in other phantoms	●	●	●	●

Scoring:

■ excellent, strength of product □ very good □ fair - not available or suitable ¹ scoring depending on detector used

Availability:

● available/included ○ optional ⊙ depending on detector used - not available or suitable

²after cross calibration

OCTAVIUS[®] QA Systems



System	OCTAVIUS [®] I			OCTAVIUS [®] II		OCTAVIUS [®] III		OCTAVIUS [®] 4D		
OCTAVIUS [®] Detector	1500	1000 ^{SRS}	729	1500	729	1500	729	1500	1000 ^{SRS}	729
Part No.	L981449	L981465	L981297	L981450	L981298	L981451	L981229	L981438	L981429	L981398

▶ Key Components		OCTAVIUS [®] detector VeriSoft [®] 6.1 or higher			OCTAVIUS [®] detector Static octagonal phantom VeriSoft [®] 6.1 or higher		OCTAVIUS [®] detector Static octagonal phantom VeriSoft [®] 6.1 or higher DAVID [®] system		OCTAVIUS [®] detector Rotating cylindrical phantom with wireless inclinometer VeriSoft [®] 6.1 or higher OCTAVIUS [®] trolley		
▶ Options											
DVH 4D for VeriSoft [®]	S070009.001	-	-	-	-	-	-	-	○	○	○
LINAC QA for OCTAVIUS [®]	L981295	○	○	○	○	○	○	○	○	○	○
DAVID [®] Dose Delivery QA System	L981390	○	○	○	○	○	●	●	○	○	○
DIAMOND [®] Software	S070020	○	○	○	○	○	○	○	○	○	○
Film Measurement	T40054.1.015	-	-	-	○	○	○	○	-	-	-
Chamber Measurement	T40042.1.010	-	-	-	○	○	○	○	-	-	-
Inhomogeneity Measurement	L981296	-	-	-	○	○	○	○	-	-	-
Gantry angle measurement	L981316	-	-	-	○	○	○	○	●	●	●
▶ Accessories											
CyberKnife [®] Accessory Package	L981454	-	○	-	-	-	-	-	-	-	-
Universal Gantry Mount	T41021	○	○	○	-	-	-	-	-	-	-
Phantom Insert Plate Semiflex 0.125 ¹	T40056.1.002	-	-	-	-	-	-	-	○	○	○
Phantom Insert Plate Farmer ¹	T40056.1.003	-	-	-	-	-	-	-	○	○	○
Phantom Insert Plate PinPoint 3D ¹	T40056.1.006	-	-	-	-	-	-	-	○	○	○
OCTAVIUS [®] Trolley	T40053	-	-	-	○	○	○	○	●	●	●
▶ Special Upgrade Packages											
OCTAVIUS [®] 4D Upgrade	L981324	○	○	○	○	○	○	○	-	-	-
OCTAVIUS [®] 1500 Upgrade	L981452	-	○	○	-	-	-	-	-	○	○
OCTAVIUS [®] 2D 1500 Upgrade	L981466	-	-	-	-	○	-	○	-	-	-
OCTAVIUS [®] 1500 Upgrade <i>seven29</i>	L981468	Upgrade for users of OCTAVIUS[®] 2D Array <i>seven29</i> systems									

● included ○ optional - not available or not suitable

¹For cross calibration of detector array against ionization chamber in OCTAVIUS[®] 4D phantom