

# Symbia S and T

System Specifications

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**SIEMENS**

## Gantry Specifications

Gantry Dimensions	Symbia S	Symbia T Series
Height	225 cm (7 ft 4.7 in)	225 cm (7 ft 4.7 in)
Width	225 cm (7 ft 4.7 in)	231 cm (7 ft 7 in)
Depth	193 cm (6 ft 4 in)	203 cm (6 ft 8 in)
Axis of Rotation (from Floor)	104 cm (3 ft 5 in)	104 cm (3 ft 5 in)
Weight Without High-Energy Collimators	2102 kg (4635 lb)	3113 kg (6863 lb)
Min./max. Patient Opening (HE Coll)	12 cm (4.7 in) / 65.4 cm (25.7 in)	12 cm (4.7 in) / 65.4 cm (25.7 in)
Min./max. Patient Opening (LEHR Coll)	19.2 cm (7.6 in) / 72.6 cm (28.6 in)	19.2 cm (7.6 in) / 72.6 cm (28.6 in)
Patient Positioning Monitor	15" flat panel color LCD display	15" flat panel color LCD display
Tunnel Opening	102 cm (40.2 in) x 78 cm (30.7 in)	70 cm Aperature (27.6 in)
Distance between SPECT and CT FOV	N/A	136 cm (53.3 in)

SPECT Motions	Symbia S	Symbia T Series
Average Autocontour Distance	1.1 cm (0.45 in)	1.1 cm (0.45 in)
Max. Radial & Lateral	Speed 72 cm/min (28.3 in/min)	72 cm/min (28.3 in/min)
Max. Lateral Position Left/Right	37.5 cm (14.7 in) / 10 cm (4 in)	37.5 cm (14.7 in) / 10 cm (4 in)
Max. CW/CCW Rotation Detector 1	410°/140°	410°/140°
Ring Rotation Range	550°	550°
Rotational Accuracy	0.1°	0.1°
Rotational Speed	0.03 - 3.0 RPM	0.03 - 3.0 RPM
Center of Rotation	≤ 0.25 pixel (64 x 64 matrix)	≤ 0.25 pixel (64 x 64 matrix)
Max. Caudal Tilt	+16° / -16°	+16° / -16°

Patient Bed Specifications	Symbia S	Symbia T Series
Width	81.9 cm (32.2 in)	81.9 cm (32.2 in)
Length	248.0 cm (8 ft 1.6 in)	248.0 cm (8 ft 1.6 in)
Weight	1140 kg (2512 lb)	861.8 kg (1900 lb)
Height	133.4 cm (4 ft 4.5 in)	133.4 cm (4 ft 4.5 in)
Vertical Motion Range	53.3-119.4 cm (21.0 - 47.0 in)	53.3-119.4 cm (21.0 - 47.0 in)
Vertical Speed	99 cm/min (39 in/min), average	99 cm/min (39 in/min), average
Pallet Material	Aluminium	Carbon fiber
Pallet Thickness	2.6 mm (.102 in)	15 mm (.6 in)
Pallet Width	40.0 cm (15.8 in)	40.0 cm (15.8 in)
Attenuation @ 140 keV	< 10%	< 10%
Max. Patient Weight	227 kg (500 lb)	227 kg (500 lb)
Max. Deflection of Patient Pallet	< 2.0 mm (< 0.08 in) for 92 kg (200 lb) patient	< 2.0 mm (< 0.08 in) for 92 kg (200 lb) patient
Max. Scan Length in Whole-Body Mode	200 cm (6 ft 6.7 in)	200 cm (6 ft 6.7 in)
Horizontal Motion Accuracy	0.5 mm (0.02 in)	0.5 mm (0.02 in)
Min./Max. Horizontal Speed	3 - 600 cm/min/(1.2 - 236 in/min)	3 - 600 cm/min/(1.2 - 236 in/min)

Optional Pallets	Symbia S	Symbia T Series
<b>Pediatric Patients</b>		
Material	Carbon fiber composite	Carbon fiber composite
Thickness	0.6 cm (0.25 in)	0.6 cm (0.25 in)
Width	25.4 cm (10 in)	25.4 cm (10 in)
Length	145 cm (57 in)	145 cm (57 in)
Weight	7.3 kg (16 lb)	7.3 kg (16 lb)
Attenuation @ 140 keV	<10%	<10%
Max. Patient Weight	27 kg (60 lb)	27 kg (60 lb)
<b>Scintimammography</b>		
Material	Carbon fiber composite	Carbon fiber composite
Thickness	1.6 cm (0.63 in)	1.6 cm (0.63 in)
Width	35.6 cm (14 in)	35.6 cm (14 in)
Length	190.5 cm (75 in)	190.5 cm (75 in)
Weight	7.7 kg (17 lb)	7.7 kg (17 lb)
Attenuation @ 140 keV	<10%	<10%
Max. Patient Weight	135 kg (300 lb)	135 kg (300 lb)
<b>Radio Therapy Planning</b>		
Material	N/A	Carbon fiber composite
Thickness	N/A	1.5 cm (0.6 in)
Width	N/A	53 cm (20.9 in)
Length	N/A	203.5 cm (80.1 in)
Weight	N/A	9 kg (20 lb)
Attenuation @ 140 keV	N/A	<10%
Max. Patient Weight	N/A	227 kg (500 lb)*

Rear Pallet Support	Symbia S	Symbia T Series
Width	26.3 cm (10.3 in)	26.3 cm (10.3 in)
Length	104.3 cm (3 ft 5.1 in)	104.3 cm (3 ft 5.1 in)
Weight	229 kg (505 lb)	229 kg (505 lb)

ECG Trigger	Symbia S	Symbia T Series
Integration	Internal (Inside Patient Bed) or External	Internal (Inside Patient Bed) or External
Framing Modes	Forward or Forward/Backward by Thirds	Forward or Forward/Backward by Thirds
Buffered Beat Window	Yes	Yes
Bad Beat Rejection	Yes	Yes
Criteria for Framing Images	Frames/R-R Interval	Frames/R-R Interval
Beat Acceptance Window	Automatic or Manual Selection	Automatic or Manual Selection

Collimator Exchanger Cart	Symbia S	Symbia T Series
Height	101.4 cm (3 ft 3.9 in)	101.4 cm (3 ft 3.9 in)
Width	82.8 cm (2 ft 8.6 in)	82.8 cm (2 ft 8.6 in)
Depth	120.4 cm (3 ft 11.4 in)	120.4 cm (3 ft 11.4 in)
Weight**	181.4 kg (400 lb)	181.4 kg (400 lb)

\* For Symbia patient beds with 227 kg (500 lb) weight limit

\*\* Without collimators

## Detector Specifications

Detector Dimensions	Symbia S	Symbia T Series
Field of View (FOV)	53.3 x 38.7 cm (21 x 15.25 in)	53.3 x 38.7 cm (21 x 15.25 in)
Diagonal FOV	65.9 cm (25.9 in)	65.9 cm (25.9 in)

Crystal	Symbia S	Symbia T Series
Size	59.1 x 44.5 cm (23.25 x 17.5 in)	59.1 x 44.5 cm (23.25 x 17.5 in)
Diagonal	73.9 cm (29.1 in)	73.9 cm (29.1 in)
Thickness	9.5 mm (3/8 in) or 15.9 mm (5/8 in)	9.5 mm (3/8 in) or 15.9 mm (5/8 in)

Photomultiplier Tubes	Symbia S	Symbia T Series
Total Number	59	59
Diameter	53 - 7.6 cm (3 in) and 6 - 5.1 cm (2 in)	53 - 7.6 cm (3 in) and 6 - 5.1 cm (2 in)
Type	Bialkali high-efficiency box-type dynodes	Bialkali high-efficiency box-type dynodes
Array	Hexagonal	Hexagonal

Detector Shielding	Symbia S	Symbia T Series
Back	9.5 mm (0.375 in)	9.5 mm (0.375 in)
Sides	12.7 mm (0.5 in)	12.7 mm (0.5 in)
Min/Max in Patient Direction*	27.9 / 36.4 mm (1.1 / 1.435 in)	27.9 / 36.4 mm (1.1 / 1.435 in)
Brain Reach**	7.6 cm (3 in)	7.6 cm (3 in)

\* For any point on the pallet at maximum 183 cm (6 ft) from the detector while the detector is at 25.4 cm (10 in) radial position.

\*\* Distance from the edge of the detector housing to the edge of the FOV.

Detector Specifications	3/8"	5/8"
<b>Intrinsic Spatial Resolution</b>		
FWHM in CFOV	≤ 3.8 mm	≤ 4.5 mm
FWHM in UFOV	≤ 3.9 mm	≤ 4.6 mm
FWTM in CFOV	≤ 7.5 mm	≤ 8.7 mm
FWTM in UFOV	≤ 7.7 mm	≤ 8.9 mm
<b>Intrinsic Spatial Linearity</b>		
Differential in CFOV	≤ 0.2 mm	≤ 0.2 mm
Differential in UFOV	≤ 0.2 mm	≤ 0.2 mm
Absolute in CFOV	≤ 0.4 mm	≤ 0.5 mm
Absolute in UFOV	≤ 0.7 mm	≤ 1.0 mm
<b>Intrinsic Energy Resolution</b>		
FWHM in CFOV	≤ 9.9 %	≤ 9.9 %
<b>Intrinsic Flood Field Uniformity (Uncorrected)</b>		
Differential in CFOV	≤ 2.5 %	≤ 2.5 %
Differential in UFOV	≤ 2.7 %	≤ 2.7 %
Integral in CFOV	≤ 2.9 %	≤ 2.9 %
Integral in UFOV	≤ 3.7 %	≤ 3.7 %
<b>Multiple Window Spatial Registration</b>	≤ 0.6 mm	≤ 1.0 mm
<b>Intrinsic Count Rate Performance in Air</b>		
Maximum Count Rate	310 kcps	310 kcps
<b>Intrinsic Spatial Resolution @ 75 kcps</b>		
FWHM in UFOV	≤ 4.1 mm	≤ 4.6 mm
FWTM in UFOV	≤ 7.8 mm	≤ 8.9 mm
<b>Intrinsic Flood Field Uniformity @ 75 kcps (Uncorrected)</b>		
Differential in CFOV	≤ 2.5 %	≤ 2.5 %
Differential in UFOV	≤ 2.7 %	≤ 2.7 %
Integral in CFOV	≤ 2.9 %	≤ 2.9 %
Integral in UFOV	≤ 3.7 %	≤ 3.7 %

Detector with Collimator Specifications	3/8"	5/8"
<b>System Spatial Resolution Without Scatter (LEHR at 10 cm)</b>		
FWHM in CFOV	≤ 7.5 mm	≤ 7.8 mm
FWTM in CFOV	≤ 13.6 mm	≤ 14.9 mm
<b>System Spatial Resolution With Scatter (LEHR at 10 cm)</b>		
FWHM in CFOV	≤ 8.3 mm	≤ 8.9 mm
FWTM in CFOV	≤ 18.6 mm	≤ 19.5 mm
<b>System Planar Sensitivity (LEHR at 10 cm)</b>		
Absolute	202 cpm/μCi	225 cpm/μCi
<b>System Planar Sensitivity (ME at 10 cm)</b>		
Absolute <sup>111</sup> In	430 cpm/μCi	565 cpm/μCi

Detector with Collimator Tomographic Specifications		3/8"	5/8"
<b>Reconstructed Spatial Resolution Without Scatter at 15 cm radius (LEHR)</b>		Filtered Back Projection	
Central Transaxial	≤ 10.2 mm	–	
Central Axial	≤ 10.8 mm	–	
Peripheral Radial	≤ 9.8 mm	–	
Peripheral Tangential	≤ 8.4 mm	–	
Peripheral Axial	≤ 9.0 mm	–	
<b>Reconstructed Spatial Resolution Without Scatter at 15 cm radius (LEHR)</b>		Flash 3D Iterative Reconstruction	
Central Transaxial	≤ 4.4 mm	–	
Central Axial	≤ 4.4 mm	–	
Peripheral Radial	≤ 4.0 mm	–	
Peripheral Tangential	≤ 3.9 mm	–	
Peripheral Axial	≤ 4.2 mm	–	
<b>Reconstructed Spatial Resolution With Scatter (LEHR)</b>		Filtered Back Projection	
Center	≤ 10.7 mm	≤ 11.5 mm	
Radial	≤ 10.9 mm	≤ 12.0 mm	
Tangential	≤ 7.9 mm	≤ 8.8 mm	
<b>Reconstructed Spatial Resolution With Scatter (LEHR)</b>		Flash 3D Iterative Reconstruction	
Center	≤ 5.8 mm	–	
Radial	≤ 5.0 mm	–	
Tangential	≤ 4.1 mm	–	
<b>System Volume Sensitivity (LEHR)</b>			
UFOV ± 7%	12,000 (cts/sec)/(MBq/cm <sup>3</sup> )	–	
<b>Detector-Detector Sensitivity Variation (LEHR, <sup>99m</sup>Tc)</b>		≤ 5.0% in	–

Detector with Collimator Whole Body Scanning Specifications		3/8"	5/8"
<b>Whole-body System Spatial Resolution Without Scatter @ 10 cm/min Scan Speed (LEHR at 10 cm)</b>			
FWHM Perpendicular	≤ 7.9 mm	–	
FWHM Parallel	≤ 7.5 mm	–	
FWTM Perpendicular	≤ 14.2 mm	–	
FWTM Parallel	≤ 14.0 mm	–	

Values are determined at the manufacturer's facility using methods described in NEMA Standards Publications NU 1-2007 "Performance measurements of Scintillation Cameras." The specialized phantoms and software required to reproduce these measurements are available from Siemens.

## BiCore™ Collimators Specifications

Collimators	LEHS	LEAP	LEHR	LEUHR	LEFB	ME	HE	EHE**	SMARTZOOM
	Low Energy High Sensitivity	Low Energy All Purpose	Low Energy High Resolution	Low Energy Ultra High Resolution	Low Energy Fan Beam	Medium Energy	High Energy	Extra High Energy	IQ•SPECT
Isotope	<sup>99m</sup> Tc	<sup>99m</sup> Tc	<sup>99m</sup> Tc	<sup>99m</sup> Tc	<sup>99m</sup> Tc	<sup>67</sup> Ga	<sup>131</sup> I	<sup>18</sup> F	<sup>99m</sup> Tc
Hole Shape	Hex	Hex	Hex	Hex	Hex	Hex	Hex	Hex	Hex
Number of Holes (x1000)	28	90	148	146	64	14	8	4	48
Hole Length	24.05 mm	24.05 mm	24.05 mm	35.8 mm	35 mm	40.64 mm	59.7 mm	50.5 mm	40.25 mm
Septal Thickness	0.36 mm	0.2 mm	0.16 mm	0.13 mm	0.16 mm	1.14 mm	2 mm	3.4 mm	0.2–0.4 mm
Hole Diameter Across the Flats	2.54 mm	1.45 mm	1.11 mm	1.16 mm	1.53 mm	2.94 mm	4 mm	2.5 mm	1.95 mm
Sensitivity @ 10 cm*	1020 cpm/μCi	330 cpm/μCi	202 cpm/μCi	100 cpm/μCi	280 cpm/μCi	275 cpm/μCi	135 cpm/μCi	185 cpm/μCi	N/A
Geometric Resolution @ 10 cm	14.6 mm	8.3 mm	6.4 mm	4.6 mm	6.3 mm	10.8 mm	13.2 mm	10.6 mm	N/A
System Resolution @ 10 cm	15.6 mm	9.4 mm	7.5 mm	6.0 mm	7.3 mm	12.5 mm	13.4 mm	19.0 mm	N/A
Septal Penetration	1.5 %	1.9 %	1.5 %	0.8 %	1.0%	1.2 %	3.5 %	3.4 %	N/A
Exit Surface	N/A	N/A	N/A	N/A	44.5 mm	N/A	N/A	N/A	52 x 60 cm
Weight	22.4 kg (49.4 lb)	22.6 kg (49.8 lb)	22.1 kg (48.7 lb)	28 kg (61.8 lb)	28.4 kg (62.5 lb)	63.5 kg (140.1 lb)	124.7 kg (275 lb)	120.2 kg (265 lb)	47.2 kg (104 lb)

\* Values measured in accordance with NEMA Standards Publication NU-1 2007 using 3/8" crystal.

\*\* The effective FOV of the EHE collimator is 53.3 x 20.3 cm (21 x 8 in).

Pinhole Collimator	Isotope		
	<sup>99m</sup> Tc	<sup>123</sup> I	<sup>131</sup> I
Hole Shape	Round	Round	Round
Number of Holes	1	1	1
Cone Length (approximate)	4 mm, 6 mm, 8 mm	4 mm, 6 mm, 8 mm	4 mm, 6 mm, 8 mm
Diameter at Base of Cone (approximate)	300 mm	300 mm	300 mm
Sensitivity at 10 cm with 4 mm	123 cpm/μCi	111 cpm/μCi	67 cpm/μCi
Sensitivity at 10 cm with 6 mm	271 cpm/μCi	243 cpm/μCi	133 cpm/μCi
Sensitivity at 10 cm with 8 mm	478 cpm/μCi	426 cpm/μCi	221 cpm/μCi
Geometric Res. at 10 cm with 4 mm	6.2 mm	6.3 mm	7.5 mm
Geometric Res. at 10 cm with 6 mm	9.3 mm	9.3 mm	10.6 mm
Geometric Res. at 10 cm with 8 mm	12.3 mm	12.4 mm	13.6 mm
System Res. at 10 cm with 4 mm	6.6 mm	6.6 mm	7.6 mm
System Res. at 10 cm with 6 mm	9.5 mm	9.5 mm	10.7 mm
System Res. at 10 cm with 8 mm	12.5 mm	12.5 mm	13.7 mm
Weight	80.3 kg (177 lb)	80.3 kg (177 lb)	80.3 kg (177 lb)

## CT System Hardware

Gantry Dimensions	T16	T6	T2/T***
Aperature	70 cm	70 cm	70 cm
Scan Field	50 cm	50 cm	50 cm
Rotation Time	0.5, 0.6, 1.0, 1.5 s	0.6, 0.8, 1.0, 1.5 s	0.8, 1.0, 1.5 s
Temporal Resolution (min)*	125 ms	150ms	400ms

Data Acquisition System	T16	T6	T2/T***
Max. Number of Slices/Rotation	16	6	2
Number of Physical Detector Rows	24	16	2
Number of Physical Detector Channels/Slice	736	736	672
Number of Detector Elements	17,664	11,776	1,344
Total Channels per Slice	1,472	1,472	1,344
Number of Projections	Up to 1,250 (1/360 °)	Up to 1,875 (1/360 °)	Up to 1,500 (1/360 °)
Sequence Acquisition Modes	4 x 0.6 mm, 12 x 0.6 mm, 16 x 0.6 mm, 2 x 5 mm, 12 x 1.2 mm, 2 x 8 mm, 16 x 1.2 mm	6 x 1 mm, 6 x 2 mm, 6 x 3 mm, 2 x 5 mm	2 x 1 mm, 2 x 1.5 mm, 2 x 4 mm, 2 x 5 mm, 1 x 2 mm, 1 x 3 mm, 1 x 5 mm, 1 x 8 mm, 1 x 10 mm
Spiral Acquisition Modes	4 x 0.6 mm, 16 x 0.6 mm, 16 x 1.2 mm	6 x 0.5 mm, 1 x 1 mm, 6 x 1 mm, 6 x 2 mm, 6 x 3 mm, 2 x 5 mm	2 x 1 mm, 2 x 1.5 mm, 2 x 2.5 mm, 2 x 4 mm, 2 x 5 mm

Tube Assembly	T16	T6	T2/T***
Tube	DURA 422 MV High Performance CT X-ray Tube	DURA 422 MV High Performance CT X-ray Tube	DURA 352 MV High Performance CT X-ray Tube
Tube Current	20-345 mA	20-345 mA	30- 240 mA
Tube Voltage	80, 110, 130 kV	80, 110, 130 kV	80, 110, 130 kV
Tube Anode Heat Storage Capacity	5.0 MHU	5.0 MHU	3.5 MHU
Focal Spot Size According to IEC 60 336	0.8 x 0.5 mm/7 ° 0.8 x 0.7 mm/7 °	0.8 x 0.5 mm/7° 0.8 x 0.7 mm/7°	0.8 x 0.4 mm/8° 0.8 x 0.7 mm/8°

CARE Filter	T16	T6	T2/T***
Al Equivalent	tube:6.3 mm Al	tube:6.3 mm Al	tube:6.4 mm Al
Beam Limiting Device	Collimator: 0.5 mm Al	Collimator: 0.5 mm Al	Collimator: 0.15 mm Al

Generator	T16	T6	T2/T***
Max. Power	50 kW	50 kW	40 kW

\*\*\* The performance and technical specifications of the Symbia T and T2 are the same. However the Symbia T is not capable of stand-alone CT while the T2 can be used as a fully functional diagnostic CT.

## CT System Software

Topogram	T16	T6	T2/T***
Length (max)	184 cm (6 ft)	184 cm (6 ft)	184 cm (6 ft)
Scan Times	2.1-19.3 s	2.1-19.3 s	2.1-19.3 s
Views	a.p., p.a., lateral	a.p., p.a., lateral	a.p., p.a., lateral

Sequence Acquisition	T16	T6	T2/T***
Reconstructed Slice Widths	0.6, 1.2, 2.4, 3.6, 4.8, 5.0, 8.0, 9.6, 10.0, 16.0, 19.2 mm	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 9.0, 10.0, 12.0, 18.0 mm	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 8.0, 10.0 mm
Scan Times Full Scan (360°)	0.5*, 0.6, 1.0, 1.5 s (±5%)	0.6, 0.8, 1.0, 1.5 s (±5%)	0.8, 1.0, 1.5 s (±5%)
Partial Scan Times (240°)	0.33*, 0.4 s (±5%)	0.4, 0.53 s (±5%)	0.53, 0.67 s (±5%)
No. of Uninterrupted Scans Per Range	99	99	99
No. of Ranges in Autorange	8	8	8
Standard Scan Cycle Time (±10%)	1.8 s at 0.6 s scan time, 1.75 s at 0.5 s scan time*	2.1 s at 0.6 s scan time, 2.4 s at 0.8 s scan time*	2.5 s 1.0 s at scan time

Multislice Spiral Acquisition	T16	T6	T2/T***
Reconstructed Slice Widths	0.6, 0.75, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 mm	0.63**, 0.75 mm**, 1.0, 1.25, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 mm	1.0, 1.25, 2.0, 3.0, 5.0, 6.0, 8.0, 10.0 mm
Scan Times Full Scan (360°)	0.5, 0.6, 1.0, 1.5 s	0.6, 0.8, 1.0, 1.5 s	0.8, 1.0, 1.5 s
Reconstruction Increment	0.1 - 10 mm	0.1 - 10 mm	0.1 - 10 mm
Pitch Factor	0.4 - 1.5 (with cone beam correction) 0.4-2.0 (without cone beam correction) 0.33 (ECG-gated studies)	0.416 - 1.8	0.5 - 2.0
Volume Pitch	6.4 - 32.0	3.0 - 10.8	1.0 - 4.0
Spiral Scan Time Max.	100 s	100 s	100 s
Scan Length (max)	186 cm (6ft 1in)	168 cm (5ft 6in)	168 cm (5ft 6in)

Dynamic Multiscan	T16	T6	T2/T***
Dynamic Scan Cycle Time (± 10%)	0.9 s at 0.6 s scan time, 0.75 s at 0.5 s scan time *	0.9 s at 0.6 s scan time, 1.2 s at 0.8 s scan time	1.2 s at 0.8 s scan time, 1.5 s at 1.0 s scan time

Image Reconstruction	T16	T6	T2/T
Real - Time Display*	512 x 512	512 x 512	512 x 512
Slice Thickness	0.6-19.2 mm	1.0-18.0 mm	1.0-10.0 mm
Scan Field	50 cm	50 cm	50 cm
Recon Field	5-50 cm	5-50 cm	5-50 cm
Recon Time	up to 16 images/s	up to 8 images/s	up to 5 images/s
Recon Matrix	512 x 512	512 x 512	512 x 512
HU Scale	-1,024 to+3,071	-1,024 to+3,071	-1,024 to+3,071
Extended HU Scale	-10,240 to +30,710	-10,240 to +30,710	-10,240 to +30,710

\* Requires syngo Heartview CT option

\*\* Requires high resolution option

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## CT System Software

Phantom CATPHAN (16 cm)	T16		T6		T2/T***	
Object Size	3 mm		3 mm		3 mm	
Contrast Difference	3 HU		3 HU		3 HU	
Dose at Surface	21.5 mGy* at 102 mAs		19.7 mGy* at 100 mAs		19.7 mGy* at 100 mAs	
Technique	0.6s, 10mm, 130kV		0.6 s, 10mm, 130kV		0.8 s, 10mm, 130kV	

\* Air KERMA, measured on the surface of the phantom with max. deviation  $\pm 30\%$

Phantom CATPHAN (20 cm)	T16		T6		T2/T	
Object Size	5 mm		5 mm		5 mm	
Contrast Difference	3 HU		3 HU		3 HU	
Dose at Surface	16.6 mGy* at 100 mAs		15.8 mGy* at 90 mAs		15.8 mGy* at 90 mAs	
Technique	0.6 s, 10 mm, 130 kV		0.6 s, 10 mm, 130 kV		0.8 s, 10 mm, 130 kV	

\* Air KERMA, measured on the surface of the phantom with max. deviation  $\pm 30\%$

High Contrast Resolution	T16		T6		T2/T	
0% MTF ( $\pm 10\%$ )	17.5 lp/cm, 0.29 mm		17.5 lp/cm, 0.29 mm		15.5 lp/cm, 0.32 mm	
2% MTF ( $\pm 10\%$ )	15.6 lp/cm, 0.32 mm		15.1 lp/cm 0.32 mm		14 lp/cm 0.36 mm	
Technique: Tungsten Wire in Air	60 mA, 130 kV, 1 s, 2.4 mm		60 mA, 130 kV, 0.6 s, 1.0 mm		60 mA, 130 kV, 0.8 s, 1.0 mm	

Homogeneity	T16		T6		T2/T	
Cross Field Uniformity in a 20 cm Water Phantom Positioned Near the Center of Rotation	Typical $\pm 2$ HU (Max $\pm 4$ HU)		Typical $\pm 2$ HU (Max $\pm 4$ HU)		Typical $\pm 2$ HU (Max $\pm 4$ HU)	

Dose, CTDI <sub>100</sub> Values*		T16		T6		T2/T	
Phantom $\emptyset$							
		110kV	130kV	110kV	130kV	110kV	130kV
16cm	A	14.1	21.3	13.3	20.1	14.4	21.7
	B	15.2	22.3	13.6	20.3	15.7	23.3
32cm	A	4.1	6.6	3.9	6.2	4.2	6.7
	B	8.2	13.5	7.6	11.6	8.4	12.8

A is at the center and B is 1 cm below the surface.  
All values are in mGy/100mAs.

\* PMMA Phantom. Absorbed dose for reference material air. Max. Deviation  $\pm 30\%$ . Expected Deviation  $\pm 15\%$ . Slice > 1mm.

Please note that these specifications are CTDI<sub>100</sub> values while the constancy test on the syngo MI Acquisition Workplace is displayed in CTDI<sub>FDA</sub>. The relationship depends on slice thickness, organ, and position

\*\* The performance and technical specifications of the Symbia T and T2 are the same. However the Symbia T is not capable of stand-alone CT while the T2 can be used as a fully functional diagnostic CT

System Environmental Requirements	Symbia S
Minimum Room Size	360 x 475 cm (11 ft 10 in x 15 ft 7 in)
Floor Loading	3.37 kg/sq cm (48 lb/sq in) maximum under the gantry
Electrical Supply	Single Phase 200/208/220/230/240 V, 50/60 Hz, 3.0 kVA
Heat Dissipation	6500 BTU/hr
Temperature Range	18°-30° C (64°- 86°F)
Maximum Temperature Gradient	4.4° C/hour (8° F/hour)

System Environmental Requirements	Symbia T Series
Minimum Room Size	373 x 630 cm (12 ft 3 in x 20 ft 8 in) without control room
Floor Loading	5.1 kg/sq cm (72 lb/sq in) maximum under the gantry
Electrical Supply	Three Phase 380/400/420/440/460/480 V, 50/60 Hz
	For T, T2: 46.2 kVA*
	For T6, T16: 72.2 kVA*
Heat Dissipation	9,215 BTU**
Temperature Range	18°-30° C (64°- 86°F)
Maximum Temperature Gradient	4.4° C/hour (8° F/hour)

\* Max during CT operation

\*\* Higher during CT operation

The Symbia family conforms to the Medical Device Directive Quality System and the Essential Requirements of the Medical Device Directive. The product is designed and tested for safety in accordance with IEC 60601 and for ElectroMagnetic Compatibility (EMC) in accordance with the European Union's EMC Directive, 89/336/EEC.

ISO 13485 certified, meeting internationally recognized quality standards for good manufacturing practices.

Siemens reserves the right to modify the design and specifications contained herein without prior notice. Product performance depends on the choice of system configuration.

Please contact your local Siemens sales representative for the most current information or contact one of the addresses listed below.

Note: Some listed applications may be optionally available.

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