Toshiba, Vantage Titan Manufacturer Specifications

View "Vantage Titan " Items

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MODEL	Vantage Titan
GANTRY	
Bore diameter/height of patient opening, cm	71 aperture, 69 bore diameter
Overall bore length, cm	140 magnet, 1.49 with covers
Bore length with minimum opening, cm	140
In-bore patient comfort features	Acoustic noise dampening Pianissimo, variable illuminated bore tunnel, variable ventilated bore tunnel, mirror on Atlas head coil, bidirectional communication intercom, audio installed (music, CD), patient alarm button, closed video monitor system, O2 monitor, emergency abort button, short gantry 1.4 m, SAR calculation before scan, operating panel on magnet, integrated Atlas coils limit the number of re-positioning when doing multiple examinations, extended table travel allows most imaging to be done feet first
PLANNING AND INSTALLATION	
Overall gantry dimensions	2.015 x 2.41 x 1.495
Minimum ceiling height, m	2.4
Extent of fringe field	3 (x) 3 (y) 5(z)
Total weight w/cooling, shielding, gradient/body coil, kg	12,514 (51,035)
Minimum dimensions of opening required for installation, W x H, m	2 x 2.4
Minimum installation area for magnet, m²	23.4
Minimum total installation area for system, m²	40
Total number of cabinets required	4
LINE VOLTAGE, VAC	12 kVa, 23 kVA (200 V), 42 kVA (400 V)
Kva	77; 12 kVA, 23 kVA (200 V), 42 kVA (400 V)
A/c, btu/hr	4,436 BTU/hr, scan room; 47,352 BTU/hr, equipment room; 2,489 BTU/hr, control room
CLINICAL USE	Whole body
COILS	
Integrated body	Standard
Type	Quadrature
Number of elements	1
Number of independent channels	1
Head	Optional
Type	Quadrature
Diameter, cm	30
Number of elements	1
Number of independent channels	16
Mirrors for patient head	Yes
Tmj	Optional
Type	Linear
Diameter, cm	7 (x 2)
Number of elements	4
Number of independent channels	16
ACOUSTIC NOISE	
Reduction technology	Vacuum enclosed gradient coils (Pianissimo)
Gradient system	
Standard name	30 XGVmT/m, 130 T/m/s
Standard strength, z-axis, mT/m	30 XGV
Standard slew rate, z-axis, T/m/s	130
Cooling type	Water
Amplifier max power/axis, kW	465 x,y,z
Amplifier cooling type	Closed
RF SYSTEM	
Power output, kW	35

Amplifier type	Transmit
Standard number of channels	16
Number of channel elements	16
Optional channel configurations	32, WIP
Receiver bandwidth, kHz	1000
Location of coil connector	Gantry and table
Standard length of coil cables, m	1.5
Number of coil connectors	Table 7 Atlas, 1 gantry, 2 L1 ports table
Coil tuning technique	Digital
Parallel imaging	Yes
Name	Speeder
TECHNIQUE	SENSE
CALIBRATION TECHNIQUE	Expand
Maximum parallel acquisition acceleration factor, standard/optional	16
COILS, CONTINUED	
Neck	Optional
Type	Array
Coverage	38
Number of elements	14
Number of independent channels	16
Parallel imaging compatible	Yes
CTL spine	Atlas Spine
Type	Array
Coverage	50, 100 total length
Number of elements	32
Number of independent channels	16
Parallel imaging compatible	Yes Z axis
Cardiac/abdomen	Optional Atlas Body
Type	Array
Dimensions, L x W, cm	56 x 56 x 6
Flexible	Yes
Number of elements	16 anterior/16 posterior
Number of independent channels	16
Parallel imaging compatible	Yes
Breast	Optional
Type	Array
Bilateral	Yes
Biopsy access	Yes
Number of elements	7
Number of independent channels	16
Parallel imaging compatible	Yes
Shoulder	Optional
Type	Array
Dimensions, L x W, cm	21 x 24.5 x 17.5
Number of elements	4
Number of independent channels	16
Whole abdomen	Standard (body coil within magnet bore)
Type	Quadrature
Dimensions, L x W, cm	86 x 60
Number of elements	1
Number of independent channels	16
Lower extremity	Optional
Type	Quadrature: QD knee foot
Diameter, cm	26:19.th
Length, cm	60
Number of elements	QD
Number of independent channels	16
Upper extremity	Optional
Type	Rectangular flex coil
Flexible	Yes
Diameter, cm	50 (L) x 20 (W) x 2 (H)
Length, cm	50 (L) x 20 (W) x 2 (H)
Number of elements	1
Number of independent channels	16

Parallel imaging compatible	When combined with other flex coils
Peripheral vascular	Optional
Type	Array
Flexible	Yes
Diameter, cm	Bottom coil stationary in tabletop; flexible flat movable coil diameter depends on depth of patient between coils
Length, cm	105 cm bottom, 56 cm or 112 cm top
Number of elements	32
Number of independent channels	16
Parallel imaging compatible	Yes
Circular general-purpose	Optional
Diameters available, cm	7, 10, 15, 20
Parallel imaging compatible	Yes in dual mode with other coil
Dedicated parallel imaging	Yes
Combined	Yes
TABLE	
Dimensions, L x W, cm	242 x 57.5
Horizontal speed, cm/s	20/150/200 mm/s
Elevating	Yes, vertical speed 29 mm/s up, 26 mm/s down
Retractable armrest	Yes, 2
Minimum height, cm	17
Limited mobility	200 (440)
Fully mobile	200 (440)
SEQUENCE SELECTION	
Minimum TR, 256 matrix, 30 cm FOV, msec	9
Minimum TR, 256 matrix, 10 cm FOV, msec	9
Minimum TR, 256 matrix, 30 cm FOV, msec	1.4
Minimum TR, 256 matrix, 10 cm FOV, msec	1.4
Minimum possible TE, msec	0.4
Minimum possible TI, msec	9
Fast-spin-echo max train length	1,024 with FASE
Echo planar imaging max train length	256
SYSTEM INTEGRATION	
Modality worklist SCU	Yes
MR Image Storage SCU	Optional
Query/Retrieve SCU and SCP	Yes
Storage commitment SCU	Optional
Modality performed procedure step SCU	Optional
IHE profiles supported	7 IHE profiles
Image processor	
Clock speed, GHz	4
Operating system	Windows XP Pro
Dedicated RAM	12 GB
Maximum number of 256 x 256 slices per acquisition sequence	256
Number of slices per sec	4,400 images 256 x 256 full FOV, 17,600 images with 256 x 256 25% FOV without interpolation
Maximum matrix	1024 x 1024
Minimum slice thickness 2-D/3-D, mm	0.5/0.05
Minimum FOV, cm	0.5
Maximum FOV, cm	55
Perfusion imaging	Optional
fMRI	Optional
Diffusion imaging	Optional
Diffusion tensor imaging	Optional
Cardiac imaging	Optional
Body imaging	Optional
3-D image reconstruction	Standard
CONTROL CONSOLE WORKFLOW	
Standard user interface	Windows/Unix
Operating system	Windows XP Pro
Number of stored scanning protocols	2000
Local hard disk capacity	73 GB
RAM	4 GB

Removable media	Yes
Features designed to enhance workflow	Preloaded PAS protocols, multiview graphic scan plan display, scan plan duplicator, batch filming, batch networking, auto archive, move couch from console, batch MIP, batch muliplanar reconstruction, optional RIS integration, sequence queue, image matrix, graphics editor
SCANNING TECHNIQUES	
ECHO PLANAR IMAGING	Optional
Single shot	Optional
Multi shot	Optional
EPI pulse sequences	Optional
Maximum EPI factor	256
Neurologic imaging	Optional
Perfusion	Optional
Diffusion weighted imaging	Optional
Diffusion tensor imaging	Optional
Functional MRI	Optional
Spectroscopy	2-D CSI, single and multivoxel
MRA	Yes
Time of flight	Yes
Peripheral	Yes
Bolus tracking	Optional
Interventional MR	Yes
Cardiac imaging	Optional
Cine	Optional
Coronary artery	Optional
Ecg gating	Optional
Motion compensation	Yes
Prospective respiratory gating	Optional
MAGNET	
CONFIGURATION	Horizontal, ultra-short-bore
STRENGTH	1.5 T
Homogeneity, ppm V-RMS	24 points/plane
Dimensions of maximum useful FOV and homogeneity,	50 at ≤2 ppm DSV, guaranteed value
Frequency drift, ppm/day	<0.1 ppm/h
Shielding	Self-shielded
Main magnet shimming	Passive and active; standard 3-channel active shimming, optional 8-channel active shimming
Patient specific shimming	Auto-active shimming
Cryogen refill frequency	Refill ≥1 year; liquid He
OTHER ATTRIBUTES	Vantage systems are short (1.4 m), large clinical FOV (55 x 55 x 50 cm), possesses high homogeneity at <2 ppm over a full 50 x 50 x 50 DSV.
FDA CLEARANCE	Yes
MARKETING REGION	Europe, Japan, US

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- Vantage XGV Manufacturer Specification
- OPART Manufacturer Specification
- ULTRA Manufacturer Specification
- OPART POTENZA Manufacturer Specification

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