

Compliance Sheet for Computed Tomography
For IMSP SCM Saint Archangel Michael

LOT 1. Computer Tomograph with 128 slices - 1 unit
For IMSP SCM Saint Archangel Michael

1. Gantry CT

Specification / requirement	Compliance
Gantry opening minimum 70 cm	Yes, 70cm
Possibility of physical inclination or software minimum +300	Yes, $\pm 30^\circ$
Distance from the focal point to the detector maximum 150cm	Yes, 948.4mm
Scan field at least 50 cm	Yes, 50cm
Integrated display showing at least the following characteristics: laser light indicator, patient name, type of examination, ECG for cardiac examinations, breath holding indicators	Yes

2. Acquisition system consisting of X-ray tube and detector

Specification / requirement	Compliance
Detector with an effective length on the Z axis of at least 38 mm	Yes, 40mm
Physical minimum number of detector rows 64	Yes, 64
The system should be able to acquire a minimum of 128 projections / rotations axially as well as helically Yes	Yes, 128

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Specification / requirement	Compliance
The total number of detector elements is at least 43,000	Yes, 53760
The smallest slice thickness purchased is a maximum of 0.75 mm	Yes, 0.5mm
High voltage generator power of at least 70 kW-will describe the rated power without equivalents	Yes, 80KW
Anodic voltage minimum 80-135 kV	Yes, 80-140kV
Anodic current of at least 20-550 mA - will describe the nominal value without equivalents	Yes, 10-660mA
X-ray tube with two foci maximum dimensions: 0.9x0.9 mm or 0.81 mm ² for small focus and 1.2x1.2 mm or 1.44 mm ² for large focus. The values will be in accordance with the IEC60336: 2005 standard	Yes, 0.6*1.2mm, 1.1*1.2mm
Total capacity of the X-ray tube for heat storage expressed in MJ (mega joule) minimum 3.5 MJ	Yes, 10.89MJ
Anode cooling capacity minimum 1000 KHU / min	Yes, 1031KHU/min
Rotation time for cardiac acquisitions maximum 0.35 seconds	Yes, 0.35s
Rotation time for any acquisition except cardiac both axially and helically for a maximum of 0.4 seconds	Yes, 0.39s

3. Patient mass

Specification / requirement	Compliance
Horizontal scanning range in axial regime: minimum 170 cm	Yes, 170cm
Horizontal scanning range in helical mode: minimum 150 cm	Yes, 170cm
Maximum positioning accuracy + 0.30 mm	Yes, ± 0.25 mm
Maximum permissible laden weight: minimum 200 kg	Yes, 205kg
The table can be lowered to a maximum height: 50 cm	Yes, 48cm

Specification / requirement	Compliance
Pitch selectable in the range: 0.6-1.5	Yes, 0.25-1.75

4. Purchase console

4.1 Minimum hardware features

Specification / requirement	Compliance
Processor with a minimum frequency of 2.4 GHz	Yes, 3.6GHz
Minimum 16 GB RAM	Yes, 16GB
HDD minimum 500 GB	Yes, 2TB
Minimum 19 "monitor with a minimum resolution of 1.3 MP	Yes, 24"
DVD / CD burner Yes	Yes
Mouse and keyboard Yes	Yes

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4.2 Features acquisition, image reconstruction and radiation dose reduction

Specification / requirement	Compliance
Possibility of manually recording patient data Yes	Yes
Possibility to take patient data from the computer system HIS / RIS Yes	Yes
Possibility of emergency patient scan Yes	Yes
Possibility to display real-time reconstructed images to verify acquisition Yes	Yes
The system to provide a radiological image of the patient's projection to facilitate the planning of the scan (topogram) Yes	Yes
The system provides an automatic projection of multiplanar images in axial, sagittal, coronal and oblique plane Yes	Yes
Its system has the ability to allow the transition from images	Yes
2D to prospective 3D images in axial, sagittal, coronal and oblique plane Yes	Yes
Possibility to schedule up to 8 sets of reconstructions in the scan protocol before starting scan Yes	Yes
Possibility of reducing the radiation dose by modulation anodic current for superficial tissues such as eyes, breasts, if diagnostic scanning is not desired for these areas. Yes	Yes
Possibility of automatic modification of the anodic current during scanning according to the size and anatomy of the patient. Yes	Yes
Possibility of dose reduction in the z-axis (Supplier's description)	Yes
Possibility to start scanning when the contrast substance arrives in the area of interest Yes	Yes
Possibility to display dose information Yes	Yes
Structured dose ratio in DICOM format Yes	Yes
Iterative image reconstruction software to reduce the radiation dose by at least 40%	Yes
Image reconstruction speed at least 16 frames / second	Yes
Image reconstruction software to allow reduction weak signal artifacts such as helix artifacts Yes	Yes

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4.3. CT angiography

Specification / requirement	Compliance
Automatic selection of the aorta and iliac arteries Yes	Yes
Automatic real-time tracking for all vascular structures Yes	Yes
Predefined protocols for viewing and analyzing structures intracerebral vascular, carotid, thoracic and abdominal aorta, extremities Yes	Yes
Predefined protocol for complete automatic removal of bone structures Yes	Yes
Vascular thrombus volume measurement Yes	Yes
Vascular measurements for minimum and maximum vessel diameter Yes	Yes
Vessel segmentation for qualitative and quantitative analysis including the following measurements: distances, volumes, extraction thrombus, minimum and maximum diameter, relative percentage stenosis and aneurysm Yes	Yes
Possibility to create reports for the analyzed studies. Yes	Yes

4.4 Brain analysis

Specification / requirement	Compliance
Brain perfusion with the determination of the following parameters: Tmax, MTT Yes	Yes
Automatic detection of cerebral vascularization Yes	Yes
Volumetric view of functional maps Yes	Yes
Automatic removal of head bones Yes	Yes
Functional maps for: brain volume, flow, contrast, capillary permeability. Yes	Yes
Segmentation of cerebral hematomas in images with and without substance of contrast Yes	Yes

Specification / requirement	Compliance
Detection and segmentation of cerebral aneurysms Yes	Yes
Possibility to generate patient reports Yes	Yes
Automatic detection of cerebral vascularization Yes	Yes
Volumetric view of functional maps Yes	Yes

4.5 Cardiac acquisition

Specification / requirement	Compliance
Possibility to cover the heart in a maximum of 5 beats	Yes
Possibility of correcting artifacts due to the movement of coronary arteries Yes	Yes
Temporal resolution for cardiac acquisitions at a rate of rotation equal to the minimum rotational speed of the tube maximum 75 ms	Yes
Possibility of dose reduction depending on the ECG signal Yes	Yes
Display the ECG path on both the operating console and the the display located on the gantry Yes	Yes
The system allows the acquisition of images for patients whose heart rate is irregular, as well as arrhythmic patients Yes	Yes
Possibility of prospective acquisition without the contrast substance for the calculation of the calcium score Yes	Yes
Possibility to make series of images (movies) Yes	Yes
Image reconstruction matrix minimum 512x512	Yes
Image reconstruction speed at least 15 frames / second	Yes

5. Post-processing station

5.1 Minimum hardware features

Specification / requirement	Compliance
Processor with a minimum frequency of 2.4 GHz	3.2GHz
Minimum 16 GB RAM	16GB
IIDD minimum 500 GB	2TB

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Specification / requirement	Compliance
Minimum 19 "monitor with a minimum resolution of 1.3 MP	24"
DVD / CD burner Yes	Yes
Mouse and keyboard Yes	Yes

5.2 Basic applications for post-image processing

Specification / requirement	Compliance
Ability to access and view images from other modes such as MR, PETCT, RX, etc. Yes	Yes
Possibility to view 3D and 4D images Yes	Yes
Calculation of distances, angles, annotations, ROI, segmentation Yes	Yes
Possibility to render volume Yes	Yes
Possibility to combine up to at least 4 volumes in one view	Yes
3D and the ability to independently adjust colors, transparency level Yes	Yes
Possibility of navigation through anatomical structures with air (trachea, colon) Yes	Yes
Possibility of automatic contouring for detected lesions Yes	Yes

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5.3 Advanced post-processing applications

Specification / requirement	Compliance
CT angiography	Yes
Automatic selection of aortic artery and iliac arteries Yes	Yes
Automatic real-time tracking for all vascular structures Yes	Yes
Predefined protocols for viewing and analyzing structures intracerebral vascular, carotid, thoracic and abdominal aorta, extremities Yes	Yes
Predefined protocol for complete automatic removal of bone structures Yes	Yes
Vascular thrombus volume measurement Yes	Yes
Vascular measurements for minimum and maximum vessel diameter Yes	Yes
Vessel segmentation for qualitative and quantitative analysis which include the following measurements: distances, volumes, extraction thrombus, minimum and maximum diameter, relative percentage stenosis and aneurysm Yes	Yes
Possibility to create reports for the analyzed studies. Yes	Yes
Cardiac analysis	Yes
Possibility of automatic analysis of coronary arteries for one or more acquisition phases Yes	Yes
Possibility to display structures in oblique, longitudinal, 2D, 3D Yes	Yes
Coronary artery measurements including: distances, volume, diameter, relative percentage of stenosis. Yes	Yes
Possibility of determining the relative percentage of infusion Yes	Yes
Possibility to view 3D angiography images Yes	Yes
Possibility of automatic extraction of the left ventricle in all phases of the heart Yes	Yes
Automatic calculation of ejection fraction and stroke volume Yes	Yes
Possibility to make movies Yes	Yes
Analysis of calcifications and densitometric structure of atheromatous plaque Yes	Yes
Determination of calcium score Yes	Yes
Oncology analysis	Yes

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Possibility to upload and compare at least two studies from the same patient Yes	Yes
Possibility to calculate RECIST, WHO Yes	Yes
Possibility to merge images from different ways: RM, CT, PET, X-Ray, etc. Yes	Yes
Possibility of 2D and 3D fusion Yes	Yes
Possibility to combine anatomical and functional images from various ways Yes	Yes
Possibility to generate reports Yes	Yes
Brain analysis	Yes
Brain perfusion with the determination of the following parameters: Tmax, MTT Yes	Yes
Automatic detection of cerebral vascularization Yes	Yes
Volumetric view of functional maps Yes	Yes
Automatic removal of head bones Yes	Yes
Functional maps for: brain volume, flow, contrast, capillary permeability. Yes	Yes
Segmentation of cerebral hematomas in images with and without contrast agent Yes	Yes
Detection and segmentation of cerebral aneurysms Yes	Yes
Possibility to generate patient reports Yes	Yes

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6. Accessories

Specification / requirement	Compliance
Positioning support: axial and coronal head, arms, mattress Yes	Yes
Electrical panel Yes	Yes
Purchase console furniture and post-processing station consisting of table and chair Yes	Yes
Double head injector for contrast medium Yes	Yes
Possibility of remote service Yes	Yes
UPS for acquisition and post-processing station Yes	Yes
Leaded glass Yes	Yes

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GUARANTEE:

Warranty period: minimum 24 months from the date of installation and commissioning

ASSOCIATED SERVICES INCLUDED:

Transport to the beneficiary's premises Yes

Installation and commissioning Yes

Training of medical staff for a minimum period of 25 days

Signed:

