

NS HOSPITAL KOLLAM. AMMENDMENTS IN ANGIOGRAPHY TECHNICAL SPECIFICATIONS

REF.NO	TECHNICAL SPECIFICATION	AMMENDMENTS
B1.	The system shall be designed with a floor/ceiling mounted arm. The C-arm shall provide a full access to the patient from any direction (illustrations to be included). The system shall be mechanically stable and rigid to prevent vibrations during operation with flexible positioning options.	The system shall be designed with a floor/ceiling mounted arm. The C-arm shall provide a full access to the patient from any direction (illustrations to be included). It is preferable to have head to toe coverage without changing the patient orientation. Graphical / Picture/ Video representation documents shall be included to demonstrate full accessibility of the system. The proposed system shall be mechanically stable and rigid to prevent vibrations during operation with flexible positioning options
B6	Depth of C arm 90 cm (or better); Supplier to specify	Depth of C arm 89 cm (or better); Supplier to specify
B7	Intelligent Collision Protection should be available	Intelligent non-contact (preferred) collision protection should be available
C2	Radiographic voltage range: 40-120 kVp in steps (or better) (to be specified).	Radiographic voltage range: 50-120 kVp (or better) in steps (to be specified)
C3	Radiographic current range: 10-1000 mA in steps (or better) (to be specified).	Radiographic current range: 20-1000 mA (or better) in steps (to be specified).
D2	A flat detector with a dimensions of at least 20x 20cm (Or better) with diagonal 28 cm (approx.)	A flat detector with a dimensions of at least 18x18cm (Or better) with diagonal 24 cm (approx.)
E2	At least three focal spots of 0.2-0.3, 0.6, 1-1.2 mm according to IEC 336 for maximum geometric resolution.	Shall have two (or more) focal spots. - Small below 0.5mm and large should be below 1.2mm (Supplier to specify the available focal spots)

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F8	All table movements, the operation of image acquisition and processing system and the operation of the C-arm should be possible from the table side control. All controls shall be easily accessible. Touch screen capabilities on the table side control preferred.	All table movements, the operation of image acquisition and processing system and the operation of the C-arm should be possible from the table side control. All controls shall be easily accessible. Touch screen (preferred); however membrane type controls Panel on table side also acceptable
G2	The digital system shall be of high acquisition and processing speed with large on line storage capacity. Shall be user friendly through mouse operation, keyboard and touch panel at the control room/ examination room.	The digital system shall be of high acquisition and processing speed with large on line storage capacity. Shall be user friendly through mouse operation, keyboard and Touch screen (preferred); however membrane type controls Panel at the control room/ examination room is also acceptable.
G17.B.3	3.3D Rotational Angiography	3D Rotational Angiography with reconstruction facility in 3D workstation.
G18	Two TFT/ LCD medical grade monochrome monitors at least 19" (or more) high resolution 100 MHz 1K x 1K, flicker free with automatic brightness and contrast control shall be included (one for live image & one for reference). One additional colour monitor (17" or more) for displaying images from external devices; One additional colour monitor (17" or more) for hemo dynamic / Vital signs display In control room- One for Live/Ref Display – 17”(or more) LCD monochrome ; One display for Patient Data / RIS information - colour 17" (or more)	In examination room- Two TFT/ LCD medical grade monochrome monitors at least 17" (or more) high resolution 100 MHz 1K x 1K,OR BETTER flicker free with automatic brightness and contrast control shall be included (one for live image & one for reference). One additional (17" or more) for displaying images from external devices / 3D / Stent Enhancement One additional monitor (17" or more) for hemodynamic / Vital signs display In control room- One for Live/Review Display – 17”(or more) LCD monochrome ; One display for Patient Data / RIS information - colour 17" (or more)

H	ADVANCED WORKSTATION: (Independent workstation separate from console) TO INCLUDE	
		Multi-planar reconstruction.
		Digital subtraction fly-through
		Maximum Intensity Projection
		Basic vessel analysis software
		Pasting software for peripheral angiography and 3D reconstruction.
		All other available software features shall be stated
		Software for transfer of images and video from DICOM to common formats (i.e. JPEG, MPEG) must be included
		Image transfer from digital system in background mode without affecting the system operation.
		Shall have archive functions of patients' data with easy irretrievability by name, date of procedure etc.
		DVD drives for digital image storage (including DICOM viewer) on a DVD or CD-R. Software for transfer of images and video from DICOM to common formats (i.e. JPEG, MPEG) must be included. USB interface to be provided to copy images to external memory disk
		should have facility to connect the workstation to hospital PACS system of any proprietary item for remote viewing and manipulation
		Installation of additional software relevant to clinical applications shall be allowed for future stages