No.PHC-KCH/LTC-LE/2013-14/505 U.T. Administration of Daman & Diu, Primary Health Centre, Kachigam, NANI DAMAN.

Dated:- 20/02/2014.

Ref:- e-Tender I.D. No.140726 dated 17/02/2014 for purchase of "C-Arm Image Intensifier System and "High Frequency X-Ray Machine" for P.H.C., Kachigam.

<u>CORRIGENDUM</u>

The above Tender Notice consist two types of Technical Specifications and hence, the

specification mentioned below may kindly be omitted.

01	C-ARM IMAGE INTENSIFIER SYSTEM	Each	
	1 Generator: 40 KHz High Freq		
	2 Tube Type: Double Focus Rotating Anode		
	3 X-Ray Tube: Fluoro- 0.3 mm x 0.3 mm Radio- 0.6 mm x 0.6 mm		
	4 Fluoroscopic KVP: 40-110 KVP (Single Step)		
	5. Fluoroscopic mA: 0.1 to 3.0 mA continuous.		
	6. Fluoroscopic Timer: Temperature controlled.		
	7. Radiographic kVp: 40-110 KVp single step.		
	8. Radiographic mAs: up to 220 mAs.		
	9. Power: 220V/50 Hz, 3.5 kW.		
	10. Type of image intensifier: 9" Image Intensifier with housing and		
	microprocessor controlled power supply.		
	11. CCD camera: High Power optice with ½ " B/W CCD camera with high		
	resolution out put.		
	12. TV Monitors: 17" High resolution monitors mounted on mobile		
	trolley.		
	13. The machine should be AERB, ISO and CE certified.		
	14. Must be manufactured in India.		
02	HIGH FREQNENCY X-RAY MACHINE	Each	
	The machine should be state of the art, high frequency X Ray machine with		
	following minimum features		
	1. Power Output should be minimum 32 KW		
	2. Rad. kvp range should be 40-125		
	3. Rad. mA Range should be up to 300 mA. (500 optional)		
	4. Rad. mAs range should be up to 200 mAs, (Upgradable)		
	5. Operating should be at 40 KHZ.		
	b. Operating console should be reather touch with Digital display of		
	7 Interleeks for Voltage Forthing kVn Thermal and Reter errors		
	7. Interiocks for voltage, Earthing, kvp, Therman and focus Perfors.		
	Anode at 2800 RPM 22.5 Kw/47 KW with focal spots of $1.0/2.0$ mm		
	9 X Ray table" should be 4 ways floating ton table		
	10. Tube stand: fully counter balanced static or 3-D Ceiling suspension		
	11. Vertical Bucky stand with 1200 mm vertical travel, with High		
	density grid 10:1 ratio, 150 lines/inch, infinity focus with a film size		
	of 6.5" x 8.5 " to 14" x 17".		
	12. The machine should be AERB, ISO and CE approved.		
	13. Must be manufactured in India with valid manufacturing licence.		

The last two pages of the Tender mentioned above, are factual, which are reprinted

below should be taken in consideration while, filling Tender for the Items specified.

SPICIFICATIONS OF C ARM IMAGE INTENSIFIER

- > A Mobile C-Arm Image Intensifier suitable for use in Operation Theater for Surgical procedures should
- be provided. The Control Panel should be fully feather touch for easy cleaning and disinfections.

A) IMAGE INTENSITIER:

- 1. Image intensifying tube 9", triple field.
- 2. CCD Camera: High Resolution Compact CCD Camera-

3. Monitor (2 Nos): 19", Medical Grade (Monochrome) Monitor along with a trolley.

B) C-ARM MOVEMENTS:

- 1. Rotation
- 2. Motorized Up,/Down

- 5. Horizontal Travel: At least 200 mm4. Arc Orbital Movement: At least 115 Degrees.5. Wig Wag: +12 5 Degrees.
- 7. Depth of "C" should be at least 620mm.

C)X-RAY GENERATOR

- 1. Line Frequency (Full wave Rectified 2 Pulse)
- 2. Output power should be at least 4KW or more
- 3. X-Ray Tube Focus : Fluoro-0.6mm X 0.6mm, Radio-1.5mm X 1.5mm.

D) CONTROL: Control should have the following:

- 1. Digital Display of KV, mA & FLR TIME.
- 2. Technic Selector switch for Fluoro & Rad. Mode Selection-
- 3. KV Selection from 40 to 100 KV in step of 1 and 10 (Rad/fluoro).
- 4. An inbuilt Radiographic Timer to select mAs in steps for more than 100mAs
- 5. Fluoroscopy Timer is 300 Sec. Cumulative
- 6. Fluoro mA from 0.1-3.0 mA, continuously variable.
- 7. Indicators for left right, up/down image Rotation should be provided on Control Panel.
- 8. Provision must exist on Control Panel for easy identification of faults, to minimize the downtime
- 9. Voltage Stabilizer: Voltage Stabilizer with suitable rating is Provided.

E) MEMORY SYSTEM should include the following: -

(16 Frame memory with the following features should be provided)

- 1. Feature of LIVE / PULSE / LIH
- 2. Averaging I to 16 frame
- 3. Contrast enhancement function
- 4. Temp. & Permanent storage up to 16
- 5. Negative image feature
- 6. Zoom feature (x2 & x3)
- 7. Mirror feature
- 8. Image rotation feature
- 9. PEN drive provision
- 10. Keeps date & time
- 11. PC connectivity through LAN port.

- : 1 180 Degrees.
- : At least 400mm
- 6. Source to Image distance should be more than 900mm.

1	300mA X-Ray Unit with Horizontal Bucky Table
	GENERATOR
	300mA, 100kVp, full wave rectified X-Ray Generator for Radiography and Fluoroscopy suitable with
	single tube.
	CONTROL
	- Microprocessor based design feather touch control panel – protect Tube
	from overload due to exposure factor selection beyond tube rating.
	- Integrated with mA stabilizer card.
	- Modular card based design for easy service.
	- Digital display of kV, mA, mAs, and timer.
	- Auto voltage compensation
	- Auto shut down – machine will automatically switch off in 30 min. if it is not in use.
	RATING
	- 40 TO 100 KVP
	- Fluoroscopy :- 0-3mA
	- Small focus :- 50mA, 100mA, 200mA
	- Large focus :- 200mA and 300mA
	<u>KVp - 40kV-100kV</u>
	- selection of kV in step of 1 and 10
	- precise selection helps to get better quality
	<u>mAs - 2 to 250 mAs</u>
	- Wide range in mAs selection in step of 1 and 10
	- Precise selection of mAs brings better quality and reduce radiation
	TIMER
	- Exposure time will be calculated by microprocessor on your selection of
	kVp, mAs and mA
	- Cumulative 5 min. timer for fluoroscopy
	<u>X-RAY TUBE</u>
	- Rotation Anode Dual focus Tube unit with pair of High voltage cable.
	- Focal Spot :- Small 1.2 mm
	Large 2.0 mm
	<u>HV CABLE</u>
	- Pair of 6 meter High Voltage cable.
	<u>HV TRANSFORMER</u>
	- Compact design heavy duty high voltage transformer with rectifiers, filament transformer, and HV
	cable bushing all immersed in oil.
	<u>3 PHASE TO 1 PHASE CONVERTER TRANSFORMER</u>
	- 3 Phase to 1 Phase Converter Transformer 30 KVA for Generator Power Supply.
	ACCESSORIES
	- Hand Switch with Flexible long cord enables the operator to keep from the Radiation area during
	Exposure, Foot Switch, Aluminum Filter 1.5 mm.
	CULLIMATER
	- Light Beam Diaphragm with auto time cut off.
	POWER SUPPLY REQUIREMENT
	- 440V AC, 30 KVA, 50HZ, 1 nree Phase, line resistance0.5 Ohms.
	<u>IUBE STANU</u> Counter belanced floor to collige stand suitable for actatic parts do tube based with 2000 b
	Counter balanced floor to ceiling stand suitable for rotating anode tube head with 360 degree
	Totations, mounted on noor-ceiling rail for convenient movements and operations.
	- monzoniai fix Table.
	- bucky with stainless steel i ray and 85 line 8:1 ratio grid, (motor and cam operated grid oscillation
	movement).

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