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**OFFICE OF THE DISTRICT HEALTH OFFICER**  
**DISTRICT SHAHEED BENAZIRABAD.**

NODHO/SBA/(ACC:) 913/14 / Dated the 30-1 2017.

**TENDER NOTICE**

The District Health Officer District Shaheed Benazir Abad, is hereby invite sealed bids from various manufacture /importer /distributors , those who are registered in income Tax and sale Tax Department, for the supply of items mentioned below .A complete set of tender inquiry may be purchase from the office of undersigned and also down load from SPPRA official web site . The bids must be delivered to this office according to below schedule, which will opened publicly in the presence of the bidders or their authorized representative who choose to attend at on same date.

**List of items.**

S. No.	Name of item	Bid security	Tender Fee	Completion time
1	Purchase & Installation of MRI along with its running of business for one year @ RHC Punhal Khan Chandio, District Shaheed Benazirabad in respect ADP Scheme No. 640.	2.5%	2000	June 2017
2	<b>Furniture &amp; other accessories.</b> Purchase & Installation of MRI @ RHC Punhal Khan Chandio, District Shaheed Benazirabad in respect ADP Scheme No. 640.	2.5%	2000	June 2017

2. **Eligibility:** Valid Registration with income tax & sales tax authorities.

3. **Method of procurement:** Two stage.

4. **Bidding/Tender Documents:**

- i. **Issuance:** Documents will be issued from date of publication hosting to 20-2-2017 on cash payment of tender fee not refundable.
- ii. **Submission:** :Last date will be 21-2-2017 up to 1-00 PM
- iii. **Opening:** will be opened on 21-2-2017 at 2-00 PM
- iv. **Un-responded tender:** will be again issued submitted/opened on following dates:-  
Attempt: (a) Issue date (b)Submission & opening date  
2<sup>nd</sup> 22-2-2017 Submission 9-3-2017 up to 1-00 PM  
opening 9-3-2017 at 2-00 PM

5. **Terms & Conditions.**

a. Under following conditions bid will be rejected:-

- i. Conditional and telegraphic bids tenders.
- ii. Bids not accompanied by bid security of required amount and form.
- iii. Bids received after specified date and time.
- iv. Bids of black listed firms.

b. **Bid validity period:-** 90 days.

c. Procuring agency reserves the right to reject all or any bids subject to the relevant provisions of Sindh Public Procurement Rules 2010.

  
DISTRICT HEALTH OFFICER  
Shaheed Benazir Abad

**OFFICE OF THE**  
**DISTRICT HEALTH OFFICER**  
**SHAHEED BENAZIR ABAD**

TENDER ENQUIRY NO. 03 FOR THE PURCHASE & INSTALLATION  
OF MRI @ RHC PUNHAL KHAN CHANDIO, DISTRICT SHAHEED  
BENAZIRABAD (ADP NO. 640) FOR THE YEAR 2016-17

Due on 21-2-2017

Time of receipt of Tender 1.00 PM

Time of opening of tender 2-00 P.M

**Technical Specifications of Permanent magnet MRI System for Rural Health Centre Punhal  
Khan Chandio, District Shaheed Benazirabad.**

Latest generation 1.5 Tesla superconductor MRI systems, with clinical application software's with coils to cover the whole body on turnkey basis. The quoted model must be the latest and successful MRI having large installed base around the world. The bidder must indicate the number of MRI installed worldwide and in Pakistan.

S. No.	ITEM SPECIFICATIONS	DESCRIPTION OF SPECKS
1.	<b>MAGNET</b>	
1.1	Type	Vertical Magnetic Field Permanent
1.2	Magnet Poles	Non Conducting Type, Eddy Current free
1.3	Field strength	.25 Tesla or higher
1.2	Shimming method	<b>Auto Shimming in 3 Axis</b>
1.3	Shimming method	Second order shimming method for better homogeneity should be provided as standard feature
1.5	Aperture Height	<b>36 cm or more Fully open type</b>
1.6	Gantry Weight	<b>11500 Kgs or less</b>
1.7	Guass Line	<b>2.0 x 1.9 m or less</b>
1.8	Magnet homogeneity / stability	3.5 ppm (plane plot method) or less.
	Gantry Opening	200 degrees in front or better 60 degrees rear or better
2.	<b>RF SYSTEM:</b>	
2.1	Transmitting power	5 KW or more.
2.2	Type	<b>Digital</b>
2.3	Transmitter Coil	QD 4 channel output
	IMPORTED RF CABIN	As per recommendation of the manufacturer Dimension of cabin should be compatible with the system
3.	<b>COILS:</b>	
3.1	Body array Coil	Parallel imaging technique compatible.
3.2	Head / Brain Array Coil	Parallel imaging technique compatible.
3.3	Spine Coil	Minimum coverage 75 cm or more.
3.4	Neurovascular coil	
3.5	General purposes flex coil/package	
3.6	Dedicated Knee coil	
4.	<b>GRADIENT SUBSYSTEM:</b>	
4.1	.Gradient Magnetic field Intensity	<b>22 mT/M or more</b>
4.2	Slew rate	<b>50 T/m/sec or more</b>
4.3	Rise Time	<b>0.5 ms or less</b>
4.4	Cooling System	Must be AIR COOLED
5.	<b>RESOLUTION PARAMETER:</b>	
5.1	Slice thickness – 2DFT	2.2 mm or less.
5.2	Slice thickness – 3DFT	01 mm less
5.3	Maximum number of Slices in 2D and 3D	<b>256 or more</b>
	Multiple Slab 3D	
6.	<b>PATIENT COUCH:</b>	
6.1	HEIGHT	<b>MORE THAN 690MM</b>
6.2	WIDTH	<b>MORE THAN 720MM</b>
	LENGTH	<b>MORE THAN 2200 MM</b>
	Lateral Movement	100mm or more 650mm or more

	Weight bearing capacity	130kg or more
7.	<b>OPERATING CONSOLE:</b>	
7.1	Standard console	
7.2	Display monitor	18" or more High resolution LCDITFT monitor (non interlaced and flicker free)
7.3	Key board & Mouse	
8.	<b>COMPUTER:</b>	
8.1	Type	Multitasking, real time interactive control.
8.2	Performance	Simultaneous scanning, image acquisition, image, reconstruction, processing and filming etc.
8.3	Clock Speed	2.6 GHz or better
8.4	Word size	64bit / 32 bit parallel array processing.
8.5	Hard Disk Capacity	30 GB or more.
8.6	Dicom package	DICOM 3.0 Query Retrieve, Import/Export. Storage & Print and work list.

9.	WORK STATION FOR RADIOLOGIST: (As recommended by <i>manufacturer</i> Vendor).	
9.1	Multimodality DICOM compatible workstation with 18" or more TFT or LCD color monitor (Non -interlaced and flicker free).	
9.2	Software for image manipulation including 3D, surface shaded display, MIP, MPR, Curved MPR, etc.	
9.3	Capable of interactive windowing window pre- sets, geometry manipulations, stack & tile <i>viewing</i> , cine, <i>movie</i> export, sequence generation of <i>volumes</i> & projections, annotations & measurements along with Print capability etc.	
9.4	CD/DVD Writing capability.	
9.5	One additional workstation to be placed at PUMHS Nawabshah with facility of emote transfer of images from MRI unit	
10.	<b>10. IMAGING TECHNIQUES:</b>	
10.1	Scan region	Whole body
10.2	Image Reconstruction	2D Fourier Transformation, 3D Fourier Transformation Method
10.3	Applicable Nucleus	Hydrogen Nucleus (Proton)
10.2	Image Type	Spin Echo Image (SE) Inversion recovery Image (IR) Gradient Echo Image (GE) Multiplanar Reconstruction (MPR) Maximum & Minimum Intensity Projection Fast protocols & motion correction for uncooperative patients
10.3	Fast SE	2-256 Echo train
10.4	Fast IR	1 or 2 Echo time
10.5	Slice thickness	0.11-100mm
10.6	Slice Plane.	Sagittal Coronal Double Oblique Multi Angle
10.7	Scan Matrix	512 X 512 or more preferable

10.8	Spatial Resolution	Minimum 0.2MM
10.9	Multislice	256 or more
10.10	Multi Echo	4 Echoes or more
10.11	Field of View	320mm or more with choice of selection
10.12	SEQUENCES (a) Spin Echo (2D and 3D) (b) Gradient Echo (i) GE (2D and 3D) (ii) GR (2D and 3D) (iii) SARGE (2D and 3D) (iv) RF SARGE (c) Inversion Recovery (STIR, FLAIR, FIR) (d) Fast Spin Echo (i) 2D and 3D (ii) SSFSE	
10.13	ANGIOGRAPHY (a) 3D time of flight 2D 3D with SSP, MOTSA and MTC (b) Phase Contrast 2D and 3D (c) Contrast Enhanced	
10.14	FLOW COMPENSATION	
10.15	MTC PULSE	
10.16	MRCP	
10.17	MR MYELOGRAPHY	
10.18	MR UROGRAPHY	
10.19	EPI based Diffusion-weighted Imaging	
10.20	Fat/Water separation	
10.21	OTHER NECESSARY SOFTWARE AS STANDARD (a) Suppression of various motion artifacts caused due to body motion, respiration and blood flow. It should be applicable with various sequences. (b) Non-contrast angiography specially for diabetic patients. (c) RF-Fat saturation	
10.22	SCAN FEATURES (A) Reconstruction Matrix upto 1024 square (B) Gated imaging (cardiac, respiratory and pulse) (C) Band width optimization (D) High resolution scan (E) Half Echo (F) Dual Slice (G) Cine imaging (H) Joint Motion Studies (I) Off centre imaging (J) Mid-display (K) Image processing	
11	<b>ADVANCED SOFTWARE/ APPLICATIONS</b>	
11.1	Any advanced software/application may be mentioned here	

12.	<b>PATIENT COMFORTS:</b>	
12.1	In bore	Lighting and <i>ventilation</i> .
12.2	Patient call system	For patient to signal the emergency.
12.3	Intercom	Integrated two-way communications between patient and operator.
12.4	Patient observation	CCD camera to observe patient during examination
13.	<b>INTERANTIONAL SAFETY AND QUALITY STANDARDS:</b>	
13.1	FDA 510K approval, CE Marked, JIS	
13.2	Country of origin: USA/UK/JAPAN/EEC	
13.3	Year of launching globally, certification must be provided	
13.4	Number of units sold out in Pakistan with good reputation	
13.5	Name and qualifications of trained Engineering staff	
14	<b>ACCESSORIES TO BE OFFERED WITH SYSTEM:</b>	
14.1	Online sine wave UPS for whole system with a minimum backup of 10 minutes on full load.	
14.2	RF Cage / Shielding with interior decor outlets of oxygen / and suction with non- magnet suction unit and oxygen flow meter including Electrical and Air conditioning need according to system requirement Renovation, Fixture & Furniture of MRI magnet room will be responsibility of vendor.	
14.3	Non- ferrous / patient monitor with ECG, NIBP, SP02.	
14.4	Latest Dry/laser imager DICOM compatible up to 14x17 inch film size.	
14.5	Patient entertainment system (Audio CD player)	
14.6	Non-ferrous patient trolley with IN stand,	
14.7	Non-ferrous Wheel chair	
15.8	Non-ferrous hand held Metal detector,	
14.9	Non - ferrous fire extinguisher.	
14.10	Quality Assurance and Quality Control Accessories for daily and monthly quality control of MRI unit.	
15.	<b>POWER REQUIREMENTS:</b>	
15.1	Single phase line voltage of 220V, 50Hz.	
15.2	Power requirement less than 12kVa	
16.	<b>TRAINING:</b>	
16.1	Training of two weeks for two Radiologists in an English-speaking country on the same supplied model at the expense of the vendor (mention the detail of each expense of training, like air fare, boarding/lodging, daily allowance and	
16.2	On site availability of application specialist for Radiologist and technologist for 04 weeks	
17.	<b>WARRANTY &amp; POST WARRANTY AGREEMENT &amp; MAINTENANCE CONTRACT:</b>	
17.1	Warranty period shall be of three years starting from date of full functional commissioning,	
17.2	Maintenance of the machine / equipment during the whole period of warranty shall be responsibility of the vendor failing which, the vendor will have to pay down time penalty as indicated in terms and condition.	
17.3	An annual optimal uptime of 95% is considered as an acceptable level of performance. Uptime shall be	

	defined as time available to user for data acquisition and processing on all working days throughout the year.	
17.4	<p>If the uptime percentage for the measurement period shall fall short of 95% annually, the following formula will be applied to determine additional days in the warranty / service contract period:</p> <ul style="list-style-type: none"> <li>• 100 - 96% No penalty.</li> <li>• 95 - 90% the warranty period will be extended by 01 times the number of days as extra down time.</li> <li>• 89 - 80% the warranty period will be extended by 02 times the number of days as extra down time.</li> <li>• Below 80% the warranty period will be extended by 03 times the number of days as extra down time.</li> </ul>	

17.5	Down time is defined as the failure in the equipment operation to acquire or process the data, resulting in inability to carry out the required procedure properly.	
17.6	Down time will start as the end user notifies the designated service / facility verbally or in writing. The response time of 12 to 24 hours will be considered as normal depending upon the location of unit.	
17.7	Down time will end when satisfactory repairs have been affected and the system is again fully functional with all parameters available for clinical use.	
17.8	The scheduled preventive maintenance shall not be considered as down time and shall not be more than three days.	
17.9	Manufacturer / supplier will be responsible for preventive maintenance of the system as per service manual.	
17.10	Vendor will mention the rate of service . Charges with and without parts for the complete system, after the expiry of five years warranty period on yearly basis along with the bid. This should also include Price major breakable arts.	
17.11	Manufacturer / supplier will guarantee the availability of spare parts and accessories for the s stem for at least ten ears.	
17.12	Manufacturer / supplier should also confirm that in event of the services costs falling or reducing in line with the manufacturer policy worldwide due to technical innovations or other reviews, they will reduce the maintenance cost accordingly .	

18.	<b>OPTIONAL ITEMS -IF AVAILABLE WITH VERNDOR (NON-AVAIABILITY WILL NOT BE THE BASIS FOR TECHNICAL ACCEPTANCE / REJECTION.</b>	<b>Mention separate price of each component.</b>
18.1	Dedicated Shoulder array coil	
18.2	Circular coils (Maximum available size)	
18.3	Flexible body coil (Maximum available size)	

18.4	Breast coil with complete application and evaluation package.	
18.5	Cardiac coil with complete application and evaluation package.	
18.6	MRI compatible Biopsy package for neurosurgical studies 1 work including MRI stereotactic frame with accessories application	
18.7	16 channel receiving system	
18.8	Diffusion Tensor Imaging (DTI) To perform Multi Directional diffusion weighted imaging for visualization of white matter tracts in Fractional Anisotropy maps.	
18.9	2K (2048x2048) imaging matrix.	
18.10	Higher slew rate.	
18.11	Detachable table and extra set of head, neck and spine coils.	
18.12	Quad scans allowing simultaneous excitation of up to four slices.	
18.13	Accessories to handle claustrophobic patients .	
18.14	Non ferrous anesthesia machine	
18.15	Connectivity with local HMIS/RIS systems.	
18.16	Two Desktop computers with 64bit Dual processors of latest technology, 02MB cache RAM at 01 GHz, HD 100GB or more, DVD/CD RW, 10/100/1000 Base T Ethernet LAN, 56K modem, Graphics Card, Networking card, 17" TFT LCD display with other standard accessories. Operating System software with CT Viewer DICOM compatible software should be included. Vendor will install I network these computers from CT scan rooms to consultant's rooms.	
18.17	Two Laser Black & White Printers, capable of printing on multi-size papers, 1200 dpi or better.	
18.18	Eight film viewers' illuminators, 14"x 17" size, with variable light control, 4x1 formats.	
18.19	Manufacturer and supplier shall be responsible for rectifying all problems at their own expense	

	and manage any defect or fault in the system developing at any time during installation and commissioning period.	
18.20	Any additional option available with each manufacturer must be offered as optional.	
18.21	MRI Compatible dual channel Contrast Media injector.	
19.	<b>OTHER TERMS AND CONDITIONS FOR MRI SCANNER INCLUDING BID EVALUATION CRITERION</b>	
19.1	Tender is invited as per SPPRA rule 46-3.	
19.2	For technical bid each vendor is requested to fill up the above mentioned Performa with the desired information in the last column, on the same MS word format in YES or NO form, with verifiable references (along with proper pagination, paragraph & line description)	
19.3	Vendor must also enclose a soft copy on CD / USB in addition to hard copy of for technical evaluation committee.	
19.4	Any wrong information / figure or hiding of facts will lead to disqualification from the tender.	
19.5	Only sole distributors in Pakistan or manufacturer are illegible to participate.	
19.6	Pricing of standard configuration with accessories and services should be quoted separately.	
19.7	Pricing of Optional configuration and post warranty terms should be quoted separately.	
19.8	Technical evaluation will be based on the standard configuration with accessories and services of the whole unit. Annexue----	
19.9	Commercial Evaluation will also be based on the standard configuration with accessories and services of the whole unit.	
20	<b>PRE-SHIPMENT INSPECTION</b>	
20.1	Pre-shipment inspection by two Radiologists will be arranged by bidder at his/her own cost.	
21	<b>Installation Requirements</b>	
21.1	Electrical work regarding MRI system including wiring of UPS, earthing & DB.	
21.2	Air-conditioning including HVAC for MRI Magnet Room and split AC for Console Room	
22	<b>Alternative Proposal.</b>	
22.1	If any bidder elects to submit alternative proposal(s) complete information on the alternative items including all data relating to technical specifications in Vol. I, II & III shall be given as per Annexure "F".	
	<b>Cost on C&amp;F basis. (LC charges will be borne by the vendor)</b>	
	<b>Cost on F.O.R. basis.</b>	