LIST OF ITEMS

Public Bidding: One (1) Lot of Supply, Delivery, Installation, Testing, and Commissioning of Branded and Brand-new Magnetic Resonance Imaging (MRI) System inclusive of All Integral and Critical Components
IB No. E-017-2024-PB

ITEM CODE	ITEM DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
RAD-01	**One (1) Lot of Supply, Delivery, Installation, Testing, and Commissioning of Branded and Brand-new Magnetic Resonance Imaging (MRI) System inclusive of All Integral and Critical Components** **A. GENERAL REQUIREMENTS** 1. The machine should be branded, brand new and a recent model (at least 2021) 2. The machine should be able to image the whole body. 3. The machine should be compatible and connected to our existing RISPACS with non-expiring Modality Work List License, at no additional cost to the Procuring Entity **B. MAGNET SYSTEM** 1. Superconducting Magnet: at least 1.5 Tesla active shielded 2. Magnet length: 175 cm or below 3. Magnet bore: at least 60 cm 4. Shimming: active and passive 5. Magnet cooling (Cryogens): Helium (Zero boil off) 6. Magnetic field homogeneity: The magnetic field homogeneity should be equal to or less than: • 45 cm DSV: 1.0 ppm • 40 cm DSV: 0.45 ppm • 30 cm DSV: 0.15 ppm • 20 cm DSV: 0.06 ppm • 10 cm DSV: 0.02 ppm **C. GRADIENT SYSTEM** 1. Maximum gradient amplitude (mT/m): At least 33 mT/m 2. Maximum slew rate (T/m/s): At least 100 T/m/s 3. Maximum Field of View (in xyz): 50x50x50 cm	1	unit	₱ 120,000,000.00	₱ 120,000,000.00
	4. Noise reduction: • With noise reduction • With vibration reduction **D. RF SYSTEM** • Water cooled • The RF computer (transmitter and receiver should be computer controlled and fully digital type 1. RF amplifier type: Solid state 2. RF Transmitter power: 10 kW or better 3. Number of Independent Digital RF receiving channels: At least 16 **E. RF COILS** 1. Main body coil integrated to the magnet: Must be quadrature 2. Head-Neck Neurovascular Array: With at least 16 channels				

	3. Spine or Posterior Array embedded in the table: With at least 12 channels 4. Anterior Array: With at least 9 channels 5. Flex coil for shoulder, knee, and hip: With at least 8 channels 6. Flex coil for wrist and hand: With at least 8 Channels 7. Coil of foot and ankle: With at least 8 channels 8. Breast Array: With at least 8 channels (optional) **F. PATIENT TABLE** 1. Should be fully motorized, computer controlled 2. Movements in vertical and horizontal directions 3. Should be able to withstand patient load of 200 kg 4. With emergency switch for quick release of tabletop 5. With automatic sensing coil ports 6. Should have patient alarm **G. MAIN COMPUTER CONSOLE AND WORK STATION (IMAGE PROCESSING AND APPLICATION SOFTWARES** **1. Main Operator Console Computer System** • Manufacturer's specification • Multitasking capabilities (scan, film, and post processing) at the same time				
	• Simultaneous scan and recon • With two-way intercom system and Emergency stop button • Image reconstruction speed of at least 60,000 FFT/second at 256x256 matrix • With CD/DVD writer • With noise and artifact reduction during reconstruction • With deep learning-based reconstruction in all anatomies **2. Application Software** i. Imaging modes, Pulse Sequences, and capabilities The following must be available with the MRI system: • Spin echo (SE) • Fast Spin Echo (FSE) • Gadient Echo (GE) • Spoiled Gradient Echo • Fast Steady State sequence • FLAIR • Fat and water saturation/separation • 2D and 3D time of flight • 2D and 3D phase contrast • Non contrast MRCP • Dual Echo Fast Gradient Echo • Echo Planar Imaging (EPI) • Short T1 Inversion Recovery (STIR) • Double Inversion Recovery (DIR) • Triple Inversion Recovery (TIR) • SWI • Motion Correction • Spectroscopy				
	• Perfusion Study • Tractography • Diffusion Tensor Imaging				

	• Metal Artifact Reduction and Correction • Compressed Sensing • Whole body DWI • Enhanced Diffusion weighted imaging • Multi shot Diffusion • Respiratory gating/ trigger • Deep Learning Reconstruction • Volumetric imaging on T1, T2, FLAIR, PD • Viability imaging • Dynamic body imaging • Dynamic brain function which includes blood flow, blood volume, mean transit time, time to peak signal intensity • Whole body metastasis screening • Non contrast vascular imaging • Fat suppression • Cerebral blood flow measurement • Non contrast MRA **3. MRI Workstation** • With three (3) sets of radiologist workstations with dual monitors and DICOM viewers with non-expiring licenses, Windows operating software, Microsoft Office, and tables and chairs • Should be able to perform Neuro image processing like Perfusion, Diffusion, Perfusion Diffusion Mismatch, Spectroscopy • Should be able to perform body image processing				
	H. OTHER REQUIREMENTS 1. Accessories • One (1) MRI compatible CCTV system for patient observation • One (1) unit Music system for the patient • One (1) unit Two-way intercom system • One (1) MRI compatible patient trolley • One (1) MRI compatible wheelchair • Two (2) MRI compatible IV stand • One (1) MRI compatible coil cabinet • Two (2) Hand held metal detectors • One (1) Laser printer or photopaper or dry film printer • One (1) heavy duty printer and scanner with refillable ink tank • Two (2) MRI compatible Fire Extinguishers • One (1) MRI compatible stretcher/gurney • One (1) MRI Compatible transfer board • Two (2) MRI compatible medical oxygen regulator/guage • Two (2) MRI compatible oxygen tanks (at least 40 liters • One (1) Oxygen monitor in the Magnet room • One thousand pieces (1000) ear plugs • One thousand pieces (1000) Head set covers • One (1) MRI compatible suction machine (optional)				
	• One (1) set MRI phantom • Two (2) units air purifiers with at least 500m3/h CADR and H13 filters with ten (10) extra H13 filters • With appropriate MR cooling/ chiller system • Security straps, warning signs, and positioning aids • Fifteen (15) pcs Gadobutrol 5 ml contrasts				

	• One (1) unit compatible pressure injector • Thirty (30) units each of syringes, tubings, contrast bottles compatible with the pressure injector • Three (3) units of UV light, at least 58W, non-ozone (optional) • One (1) unit MRI compatible pulse oximeter • One (1) unit Network attached storage, at least 100 TB storage and 5 bays **2. Airconditioning** • Two (2) units appropriate air conditioning system for the magnet room • Two (2) units appropriate air conditioning system for the equipment room • One (1) unit appropriate air conditioning system for the control room • One (1) unit appropriate air conditioning system for the recovery/preparation room • One (1) unit appropriate air conditioning system for the waiting area • Two (2) units appropriate air conditioning system for the reading and doctor's room • One (1) set of appropriate dehumidifier • All conditioning units must be inverter type **3. MRI Room preparation** • RF shielding for the MRI room should be provided. • Magnetic shielding should also be provided if needed. **4. Civil works and Electrical works** • The needed civil and electrical works are included (Plans are done by Engineering Section) • Step up or step down transformer if needed • The supplier must provide connection to the hospital's main power line • One (1) unit UPS for the MRI scanner and chiller with at least 10 minutes backup time • One (1) Transient voltage surge suppressor (TVSS) compatible with the MRI Scanner **5. Warranty, Maintenance, Service** • Three (3) years comprehensive warranty on parts and services of the MRI machine to start after end users' acceptance • At least one (1) calibration per year • At least four (4) preventive maintenance per year **6. Trainings** • At least two (2) weeks or 80 hours off site training for 2 Radiologic Technologists to a health facility with the same MRI model at no cost to the Procuring Entity • At least two (2) weeks or 80 hours on site training for 2 Radiologic Technologists, Radiologists, and Physicist at no cost to the Procuring Entity • The Supplier shall provide training certificates upon completion of all training requirements **7. Others** • Product data sheet of the MRI in English should					

	be submitted as attachment to support the Statement of Conformity to Section VII Technical Specifications. • Must pass the performance/ acceptance testing conducted by FDA or its accredited testing body • Must pass the requirements for FDA registration/ licensing • Undertaking to provide magnetic shielding, if necessary for the projects upon conduct of site inspection • Certification that the manufacturer has been in the business of manufacturing MRIs for at least 20 years • Certification that the brand being offered has at least 15 MRI installations in the Philippines in the last five (5) years and can be visited at End user's disposal • Certification that the brand that being offered has been in the local market for at least 15 years • Certification by the manufacturer that supplies, parts, and accessories shall be available for at least 15 years after expiration of warranty • Certification that service engineers trained on service and repair are available in the Philippines • Certification that the manufacturer has a local office in the Philippines for the last 15 years with SEC Registration • MRI machine should be US FDA approved • Certification of Manufacturer's ISO compliance to 13485:2016 • Certification that the MRI machine proposed is a current model launched within the past 3 years (at least 2021) • Service and operations manuals, soft and hard copies **I. TURN KEY** • Room renovation and other civil works including floor, wall, ceiling finish, appropriate doors, and furniture in the MRI area • Electrical works within the MRI area • Plans and terms of references for the MRI area including civil works, electrical works, furniture are care of Engineering Section				
				GRAND TOTAL	₱ 120,000,000.00

Submitted by:

SGD.

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