

## ANNEX 1

### **SPECIFICATIONS: C-ARM**

**Quantity: 1 unit**

#### **Description:**

Compact easily transportable mobile counter balanced C-ARM unit with Image Intensifier Unit, Dual Flat Panel high resolution monitors, image processing software for unobstructed positioning and enhanced use.

- It should be a high-frequency x-ray generator with a power output of at least 15kw.
- 27-inch or larger high-resolution TFT/LCD monitors with at least 1280 x 1024 resolution.
- The monitor should be rotatable up to 180 degrees, and it should have a pre-programmed list of acquisition settings organized by procedures such as orthopedics/neuro, urology, gastroenterology, pain management, and peripheral or vascular angiography.
- Operating modes such as pulsed fluoroscopy, subtraction or roadmap, pulsed cine mode, and radiography should be available.
- The collimator should be a full parallel lead shutter collimator.
- DSA should be available for vascular and peripheral procedures.
- The Monoblock tube head should be used, and the flat panel detector should be made of amorphous silicon with a cesium iodide conversion screen.
- The A/D conversion of the detector should be 16 bits and 30 fps.
- The detector size should be 30\*30cm or 21\*21cm or better.
- The software package for Vascular software, Live graphical overlay, stenosis quantification, 2D,3D measurement must be included.
- The console should have an ergonomic design and a tab to control the realtime image processing, data transmission, and post-processing parameters.
- It should have a simple workflow that includes patient entry and emergency patient options for retrieving work lists from HIS and RIS (Hospital Information system and Radiology Information system)
- The software should support manual contrast and brightness adjustment, zooming, magnifying glass, image rotation, annotations, last image hold, image invert - negative & positive, horizontal & vertical flip, and so on.
- Radiation dose delivery - image wise as well as cumulative - must be displayed on the Live Monitor during the various procedures performed on the C Arm.
- Image storage should be at least 100,000 images or greater.
- It should have a touch user interface control panel with a minimum display size of 13 inches.
- A soft feather touch keyboard and mouse embedded in the trolley should be available for easy operation.
- It should be a smart connection that eliminates the need for unnecessary cabling between the c-arm and the trolley.
- Electromagnetic brake control should be available.
- Metal detection for metal implants is also designed.
- The C - ARM and housing should have an anti-microbial coating.
- The system should include a CD/DVD writer, USB connectivity, and a LAN port.
- The system should support DICOM and PACS.

**Additional accessories**

- Standard accessories including Lead Apron -6 pieces.
- Thyro guard- 05 pieces

**Power Requirement:**

- Power input to be 220-240VAC, 50Hz fitted with UK plug.

**Standards and Requirements:**

- The X-Ray unit should be approved by BIS/European CE/ USFDA and AERB (mandatory) & the offered detectors should be European CE & USFDA Approved.
- It should be facilitating the remote service module 27\*7 demote assistance for diagnostics.
- Installation will be performed at no cost by the supplier.
- The offer should include minimum two years of warranty and CMC cost should also be quoted along with the offer for the period of 3 years after warranty.
- Should include the tools for calibrating and checking the radiation.
- A 2 TB SSD external hard drive is required to store backup data, as well as an external CD/DVD drive for multiple CD or DVD burns.

**Additional Remarks:**

- Complete product details to be enclosed with the original brochure or catalogue. (Soft or hard copy).
- Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.

**Training and Validations Requirements:**

- Onsite Application and Operator training for users and technical training for in-house Engineers should be provide by the Authorized trainers.
- Validation procedure should be carried out at the time of installation.

**International Training:**

- The successful bidder shall provide one international training/conference in related field of radiology for two radiographers within one year.

**Warranty & Service:**

- The company should have service engineers who should be available 24/7 on phone & at site within 48 hours of reporting an error.
- Operator's manual and Service manual should be provided.
- All access codes to service mode shall be provided.
- Manufacturer's standard warranty with documents should be available.

**Distributorship:**

- Must submit a letter authorizing submission of tender for this project from manufacturer.
- Suppliers shall have a valid authorized distributor license or reseller license for the country/region at the beginning of agreement or signing of contract.

**Demonstration:**

- All prospective bidders shall demonstrate the unit online before technical evaluation. This should include detailed explanation about, operation, other accessories utilizations. And also, a short video how the equipment works.

**AEH Responsibilities:**

- AEH shall provide a place to install the equipment's.
- To conduct awareness among AEH staff on equipment use and functions.
- To ensure users are operating equipment as per manufacturers recommendations and advice.
- To prepare and share with supplier AEH 4 months consumables requirements required to provide services.

**Country of origin:**

- USA, Canada, UK, Austria, Belgium, Denmark, Finland, Germany, France, Hungary, Ireland, Spain, Japan .  
Australia, Korea, China, Turkey, India.

**Year of Manufacture:**

- 2021 or later