

Technical Specification for Equipment

Biomedical Engineering Department

Equipment: Mobile X ray machine

Specification:

- Compact, lightweight, easily transportable mobile radiographic unit suitable for x-ray studies in emergency & Trauma departments, ICCU and Wards bedside.
- The unit must include the following.
 1. Power line connections: The unit should operate in single-phase power supply and should have overload protection. Plug in facility to any standard wall outlet with automatic adaptation to line voltage 200 to 240 Volts 13-Amp plug.
 2. The Generator: Must be micro-processor controlled, high frequency, output 2.5 KW or above to give constant output suitable for radiography.
 3. It should have a digital display of MAs and KV and electronic timer.
 - KV range 40KV to 100KV
 - mA range should be minimum 35 mA or more.
 - Shortest exposure time-5ms
 4. X-ray Tube: Output should match the output of the generator, must have a rotating anode with at least 3000rpm and focal spot should be less than 1.5mm. Mention the heat storage capacity of the anode. Multi-leaf collimation should be possible with inbuilt light source.
 5. The unit must have an effective braking system for parking, transport and emergency braking. The tube stand must be fully counterbalanced with rotation in all directions. It must have an articulated arm for maximum positioning flexibility in any patient position. The angles in various planes to be specified by manufacturer.
 6. Needed flexible operation panel enables free adjustments of rotating, tilting and height adjustment while viewing the display.
 7. Should support virtual grid like software for the better image quality.
 8. Should provide a detector and 3 batteries for the detector.
 9. There will be chargeTwo light weight Zero lead aprons should be provided with each unit.
 10. Lead aprons hanger should be available in the machine.
 11. Should be a CE/FDA/AERB Approved product and should have ISO standards.
 12. Warranty: -
 - 12 months from the date of handing over or installation and commissioning.

- User/Technical/Maintenance manuals to be supplied in English and certified of calibration and inspection.
- List of important spare parts and accessories with their part number and costing has to be provided.
- Should have a local vendor available in Maldives.