

TECHNICAL SPECIFICATION

100MA HIGH FREQUENCY MOBILE X-RAY MACHINE

X-RAY GENERATOR:

- High Frequency X-Ray generator having frequency of 20 KHz or more.
- Power output should be 6.0 KW
- Radiographic KV range should be 40 to 110 KV
- Rad mA : 100 mA or more

X-RAY TUBE HEAD:

Monoblock version X-Ray Tube Head with Stationary Anode Single focuses X-Ray Tube. A very compact H.V. Tank filled with high dielectric transformer oil or Monoblock HT tank should be provided. The monoblock consists of Tube, H.V, transformer, filament transformer, H.V. Rectifiers & One No. Manual Collimator should be provided, with auto off facility.

CONTROL PANEL:

- KV increase and decrease switches
- mAs increase and decrease switches
- Machine ON/OFF switch
- Collimator Lamp ON Switch
- Standby & Exposure Switch
- Self diagnostic Programme with indicators for:-
 - Earth fault error
 - KV error
 - Filament error
 - Tube head Thermal Error
- Stand by (Ready) & X-Ray On Indicator
- Stand by (Ready) & X-Ray On Indicator
- Incoming Voltage Indicator. There should be provision for the machine to work from 195 Volts Input supply to 265 V input supply.
- Anatomical Programming Radiography (i.e. APR) should be provided in which KV & mAs are automatically selected depending upon the physique of the patient and part of the body to be X-Rayed.
- Anatomical Programming should be of minimum 200 programmes should be provided. There should be a provision that the control should get off, if no key is pressed for 10 mins.
- A Hand switch with Dual action for exposure Release with Retractable Cord is should be provided for Radiation Protection to the Operator.

TUBE STAND:

Mobile stand with 4 wheel design, which ensures easy mobility & steering. The spring Balance Stand (No Gas Spring) should be very light in weight with tube arm. It should be very easy to maneuver & allow smooth movements of Tube Head in vertical plane. Lead lined cassette storage box. Large wheels for easy mobility should be provided. The stand is designed for maximum maneuverability of the unit and is able to achieve tube focus to floor of 75 inches and tube focus to table top distance of 46" (Standard Radiography Table). The equipment should occupy minimum floor area & is capable to be taken through elevators with ease.

The Entire Tube Arm should be Swiveled + or - 90 degree (180) degree for taking sidewise X-Rays without moving Machine.

POWER SUPPLY:

The unit should be operable on 230 Volts, 50Hz, 15 Amps with line regulation of + or -15% Line resistance less than 0.4 ohms.

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ACCESSORIES:

Following accessories should be supplied with the machine at the time of installation

- a) Lead Apron 0.5mm Pb equivalent **1No.**
- b) Lead Barrier 1.5mm Pb equivalent with lead viewing window **1 No.**
- c) Cassettes with Image Intensifying screens of various **2 Nos. each**
Sizes (inch) :- 8" X 10", 10" X 12", 12" X 15",
14" X 17".
- d) One Packet of films of each size
- e) Film hangers for manual Processing for film **3Nos. each**
sizes (inch): 8" X 10", 10" X 12", 12" X 15",
14" X 17".
- f) Chemical Tank 9 liters with lid **1 No.**
- g) Fixer & developer **1 No. Each**
- h) Dark Room Light **1 No.**
- i) Lead divider 14" X 17" (inch) **2 No.**

OTHER REQUIREMENTS:

1. The manufacturer should be ISO-9001: 2008 & ISO 13485: 2003 certified. (valid documentation should be submitted in technical bid)
2. The unit should be approved by AERB. (Valid documentation should be submitted in technical bid).
3. The company should submit technical compliance sheet as per technical specifications mentioning the make & model of quoted item in the Technical bid .
4. The company should have a local Service center.
5. The company should have proven track record in Govt. sector.
6. The Company should provided **QA & QC test report** at the time of Installation & in every two years during guarantee period.
7. **Guarantee:** Three years on complete unit from the date of the installation.
8. **CMC:** CMC may be given for seven year (on yearly basis) after guarantee period of three years.
9. Installation will be done by supplier free of cost.
10. The Company should submit original catalogue and data sheet (signed & stamped) of quoted item at the time of bid submission. Any declaration / undertaking in this regard shall not be considered.

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Executive Director (EPM)
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