

Technical Specification of X-ray Machine 100 mA with Voltage Stabilizer

| S.N. | Purchaser's Specifications | Bidder's Offer | Remarks |
|----------|--|----------------|---------|
| | X-Ray Machine 100 mA with Voltage Stabilizer | | |
| | Manufacturer | | |
| | Brand | | |
| | Type/Model | | |
| | Country Of Origin | | |
| 1 | Description of Function | | |
| 1.1 | X-ray unit is required to perform routine X-ray studies in the hospital. | | |
| 2 | Operational Requirements: | | |
| 2.1 | General purpose X-ray machine 100 mA with fixed table. | | |
| 3 | System Configuration | | |
| 3.1 | X-ray machine 100 mA with fixed horizontal table, voltage stabilizer and with complete accessories. | | |
| 4 | Technical Specifications | | |
| 4.1 | X-ray Generator: <ul style="list-style-type: none"> Must be microprocessor controlled high frequency generator, output 6 KW or above to give a constant output suitable for radiography. Compact soft touch control panel. Machine ON/OFF switch. Must have a digital display of mAs and kV and an electronic timer. KV range: 40KV to 110KV. mA range: 100 mA or more. mAs range: Please specify mAs range. Anatomical Programmable Radiographic (APR) mode shall be available. Self-diagnostic programmed with indicators for earth fault error, KV error, Filament error, Tube head, thermal error etc. A dual action hand switch with retractable cord must be provided for radiation protection of operator. | | |
| 4.2 | X-ray Tube: <ul style="list-style-type: none"> Rotating anode X-ray tube with dual focal spot & thermally protected (specify focal spot sizes, smaller focal spot size will be preferable). Collimator with auto shut off facility must be provided. | | |
| 4.3 | Table: <ul style="list-style-type: none"> Horizontal bucky table with floating table top with grid of 17 1/4" x 18 3/4", grid ratio of 8:1 103 lines or better must be provided. The bucky tray must accept cassettes up to "14x17". | | |
| 4.4 | Column Stand: Tube stand from floor to ceiling must be provided. | | |
| 4.5 | Voltage Stabilizer for 100 mA X-ray machine for trouble free operation: <ul style="list-style-type: none"> Capacity suitable to match the output of the X-ray machine. The regulations of the output pre-set voltage must be automatic. Must work for input voltage range of 100-290VAC, single phase. Automatic cut-off time: between 2 to 4 seconds of input | | |

(u)erl

Er. Umesh V.



प्रदेश सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
भारत

मेडिकल सुपरिटेण्डेंट

| S.N. | Purchaser's Specifications | Bidder's Offer | Remarks |
|-----------|--|----------------|---------|
| | <p>exceeding the high/ low limit.</p> <ul style="list-style-type: none"> There must be a restart delay of 6 to 9 minutes after the cut-off. Analogue meters included to provide readings for input voltage as well as output voltage. Same meter can be used with the help of a switch to indicate output and the input voltage as desired. Output voltage must be 220 V $\pm 7\%$, 50 Hz. Stability of output voltage with temperature changes. All transformers to be vacuum impregnated with high-class varnish, for reliability and long life. Provision for two outputs with combined 15/5A sockets. (Two sockets to be provided, each are having 15/5A Sockets) with power cable. There must be a quick-start facility, which will start the system instantaneously by bypassing delayed start. Outer cabinet must be enamelled after proper anti rust process. | | |
| 5 | Accessories, spares and consumables | | |
| 5.1 | Accessories: <ul style="list-style-type: none"> Lead apron lightweight with Lead equivalence 2mm t- 01no. Chest Stand, floor standing- 01 no. | | |
| 5.2 | All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above). | | |
| 6 | Operating Environment | | |
| 6.1 | The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc. | | |
| 6.2 | Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length. | | |
| 6.3 | Suitable voltage stabilizer as specified above must be provided. | | |
| 7 | Standards and Safety Requirements | | |
| 7.1 | Must submit ISO13485 for Medical Devices AND | | |
| 7.2 | CE (93/42 EEC Directives) or USFDA approved product certificate. | | |
| 7.3 | Shall meet: <ul style="list-style-type: none"> IEC 60601-1-3 - Part 1: General Requirements for safety - Collateral Standard: General Requirements for Radiation Protection in Diagnostic X-Ray Equipment. IEC 60601-2-7 - Part 2-7: Particular Requirements for the Safety of High-Voltage Generators of Diagnostic X-Ray Generators. | | |
| 8 | User Training | | |
| 8.1 | Must provide user training (including how to use and maintain the equipment). | | |
| 9 | Warranty | | |
| 9.1 | Comprehensive warranty for 2 years after acceptance. | | |
| 10 | Maintenance Service During Warranty Period | | |
| 10.1 | During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever | | |

| S.N. | Purchaser's Specifications | Bidder's Offer | Remarks |
|-----------|---|----------------|---------|
| | required. | | |
| 11 | Installation and Commissioning | | |
| 11.1 | The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail. | | |
| 12 | Documentation | | |
| 12.1 | User (Operating) manual in English. | | |
| 12.2 | Service (Technical / Maintenance) manual in English. | | |
| 12.3 | List of important spare parts and accessories with their part number and costing. | | |
| 12.4 | Certificate of calibration and inspection from factory. | | |

Umesh

Er. Umesh Kumar Chaudhary
NEC No.: 162-Biological A



Medical Superintendent
मेडिकल सुपरिन्टेंडेंट