

Technical specification of portable x-ray machine, 100MA with single probe.

Purchaser: Tulsipur Sub Metropolitan city, Tulsipur , dang

Medical equipment : portable x-ray machine , 100 MA with single probe.

Quantity : 1



S.N.	Office Requirement
1	Description of Function
1.1	Portable X-ray unit for undertaking X-ray studies at the point of care (Operation Theatre, Casualty, Wards) when it is not safe or practically it is difficult to transfer the patient to the x-ray department.
2	Operational requirements
2.1	The unit shall be lightweight and easy to carry from one place to another. The X-ray machine works on mains electric supply or Diesel Generator.
3	System Configurations
3.1	Portable X-ray machine, 100mA with complete accessories.
4	Technical Specifications
4.1	The portable X-Ray machine shall be compact, high output, easily transportable onsite.
4.2	The system shall be solid state type with inbuilt HT generator.
4.2	X-ray Generator: <ul style="list-style-type: none"> Must be microprocessor controlled high frequency generator. Output not less than 8 kW at nominal power rating Soft touch key operations. It shall have a digital display of mAs and kV and an electronic timer. KV range: 40kV to 110kV mA range: 100mA or more. Exposure time : 0.01 to 5 sec mAs range : 0.1 to 200 mAs Anatomical Programmable Radiographic (APR) mode shall be available. Bidder shall provide details of total power consumptions
4.3	X-Ray Tube: <ul style="list-style-type: none"> Stationary Anode tube Heat storage capacity : approx. 70 to 80 KHU Focal spot 1.2/1.4 mm or better.
	Collimator: <ul style="list-style-type: none"> Manually adjustable multileaf collimator, rotatable $\pm 90^\circ$ Built in time switch Halogen lamp
4.4	X-Ray Stand <ul style="list-style-type: none"> Height adjustable approx: 180 cm Light in weight, easy to carry It shall have back and forth movement of X-ray unit Stand shall have four castor wheels and it shall be easily assembled and disassembled onsite. Effective braking system with rotation in all direction.
4.5	Exposure with remote control shall be available.
4.6	Shall have cassette storage facility with 4-6 cassettes of all sizes.
4.7	The X-ray unit shall have over current protection.
4.8	Portable X-ray carrying case: <ul style="list-style-type: none"> Robust and compact size

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	<ul style="list-style-type: none"> • Water and dust resistant construction • Military grade case • Case must have handle on all side for ease of transport • Each part of X-Ray machine shall be light in weight and easily transportable when fit in case. <p>Bidder shall provide separate case for each part of X-Ray machine so that carrying from one place to another place shall be easy.</p> <p>In addition to above bidder shall also provide one case able to fit entire X-Ray machine</p>
5	Accessories, spares and consumables
5.1	Lead protective screen: 01 no.
5.2	Lead aprons lightweight: 02 nos.
5.3	Grid: Stationary grid ratio 8:1 or better with 60 to 70 gridlines per cm or better.
5.4	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer. Bidders shall specify, in a separate Excel worksheet, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications Form.
5.5	All standard Maintenance tools and cleaning /lubrication materials where applicable shall be included. Bidders shall specify, in a separate Excel worksheet, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications Form.
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 5m automatic retractable power cable for easy connection to any wall outlet with protective ground conductor.
7	Standards & Safety Requirements
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND
7.2	CE (93/42 EEC Directives) or USFDA or BIS 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	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.
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 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.

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