



Ministry of Health and Wellness

MHPQ/EQ/2023-2024/Q44

Addendum No. 1

Supply, Installation and Commissioning of Direct Digital Remote-Controlled Radiography with Fluoroscopy (R/F) System for Dr A.G. Jeetoo Hospital – MHPQ/EQ/2023-2024/Q44

To: All Potential Bidders

The Ministry has carried out a bidding exercise on the above subject on 29 May 2024.

2. Following request for clarification from a potential bidder, please find below the corresponding information in respect of Direct Digital Remote-Controlled Radiography with Fluoroscopy (R/F) System:

Line Specification	Clarification Requested	Reply
5.2- High Frequency Generator should be at least 80 kHz	Our proposed system and configuration incorporate a high frequency generator of 50 kHz and according to the Manufacturer, the machine is designed to operate at such a frequency without compromising any of its defined functions and capabilities. The machine is optimized for better image quality and enhanced patient safety in terms of its dose management tools and image processing algorithm. We therefore make a request to consider machines having a high frequency generator of frequency of at least 50 kHz	The generator frequency with at least 50 kHz can be accepted <u>PROVIDED</u> that the potential bidder can provide satisfactory documentary technical evidence and comparative data from manufacturer to prove that their design for a lower frequency generator in their equipment is not compromising any tender requirement in terms of radiographic, fluoroscopic performance, power supply, image quality, patient safety or any tender specification.
5.12 – Automatic X Ray Tube Calibration	Our proposed system's operating console enabling access to verification of the filament current (I) as a function of exposure over a pre-defined interval recommended by the Manufacturer. The values of the filament current could be checked and re-adjusted as per the "filament emission curve". Our proposed machine incorporates a "high performance x-ray tube" which necessitates manual calibration at a defined period of time set by the Manufacturer ensuring there is neither tube current overshoot nor thermally induced x ray tube damaged. Our high performance x-ray tube is designed to cater for a relatively more exposures (mixture and type of examinations) with a much longer lifetime. We therefore make a request to consider manual x-ray calibration with justified	<p>Automatic x-ray tube calibration or other alternative methodology to calibrate the x ray tube whenever necessary for optimum performance as per manufacturer's recommendations will be considered.</p> <p>In the case of manual procedures, bidders will have to provide documentation/extracts from manual about their respective calibration protocol at the time of bid.</p> <p>Also, for manual calibration of X-ray tube, bidders will have to prove that they are equipped with all competencies in terms of skilled technical expertise, special tools and resources to perform manual X-ray tube calibration as per manufacturer's recommendation.</p>

Line Specification	Clarification Requested	Reply
	<p>Manufacturer's protocol for maintenance and reliability check of x-ray tube.</p>	<p>At the time of bid, bidders will have to provide evidence that their local technicians/engineers are already trained to undertake calibration procedures of x-ray tubes in x ray equipment safely.</p> <p>In case of damage to the x - ray tube during manual calibration, suppliers of the equipment may be liable to replace the x ray tube at their cost.</p>
<p>7.4.2 - Adjustment of the table top height from floor from a minimum of 65 cm</p>	<p>Our proposed system has a minimum of 69 cm (4 cm minor difference). As a matter of fact, thousand units of the proposed system were successfully installed worldwide to the satisfaction of the hospitals. We therefore make a request to consider table top height from a minimum of 69 cm.</p>	<p>Adjustment of table top height from floor with a minimum height of 69 cm \pm 4 cm from floor level will be accepted.</p>
<p>7.10 - Table to support patients of at least 200 Kg and at least 75 cm table width.</p>	<p>Our proposed system support patients up to mass of 150 kg tested for patients sitting on the middle of the table without appreciable sagging. The table was designed taking into consideration the worldwide demographic weight in accordance to international codes including the guideline from the World Health Organisation (WHO). According to the average body weight of Mauritius (Statistics), 150 kg is enough for the system. In addition, we draw your attention that 10 (ten) x-ray machines were installed and in operation for more than 10 years at the casualty of the public hospitals in Mauritius. The floating table of those machines was designed for 150 kg and up to now, there was no reported issue in relation to the load bearing of the table. We therefore make a request to consider a table load bearing of at least 150 kg.</p>	<p>Following feedback from user department, line specification 7.10 can be amended to "table to support patients of at least 150 kg and at least 75 cm table width.</p>
<p>Wide range of exposure incidence angles (up to \pm40degrees or better)</p>	<p>Oblique projection by tilting the x-ray tube at a maximum 30° which allows for effective GI, orthopedics, and other examinations. According to the Manufacturer, 30° is enough for effective clinical examinations.</p>	<p>Wide range of exposure incidence angles of up to thirty degrees or better is acceptable.</p>
<p>Bidder to supply 5 spare lamps for collimator.</p>	<p>Our proposed system incorporates a collimator with LED type lamp which has longer lifetime in comparison to halogen type. We therefore make a request for such requirement be applicable only to halogen type lamp.</p>	<p>Bidders can propose halogen or LED type of lamps.</p> <p>All bidders to provide specifications from manufacturer and specify average lifespan of the type of lamp in the proposed make/model of equipment.</p> <p><u>Quantity required:-</u></p>

Line Specification	Clarification Requested	Reply
		<p>For halogen lamps: 5 spares are required.</p> <p>For LED lamp: 3 spares are required PROVIDED that bidders give documentary evidence from manufacturer regarding longer lifetime of the LED lamp as compared to conventional halogen lamp for x ray machine with fluoroscopy.</p> <p>In case, the bidder fails to provide evidence at time of bid regarding LED lamps' longer life in their equipment, 5 spares of LED lamp will have to be provided at time of commissioning.</p>

3. You are also being informed that following Circular No. 8 of 2024 from the Procurement Policy Officer, the closing date for the submission of bids has been extended to Wednesday 26 June 2024 up to 09:59 AM at latest and bids will be opened on Thursday 27 June 2024 as from 10:00 A.M.

4. You are therefore requested to:

- (a) take into account the whole of addendum No. 1 whilst submitting your bid; and
- (b) enclose the whole of addendum No. 1 in your bid document while submitting your bid.

**Senior Chief Executive
Ministry of Health and Wellness
5th Floor, Emmanuel Anquetil Building
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17 June 2023**