



RAJASTHAN MEDICAL SERVICES CORPORATION LTD.

D- Block, Swasthya Bhawan, Tilak Marg, C-Scheme JAIPUR (Raj)



Ph. No. 0141-2223887, Fax No. 0141-2228065

CIN: U24232RJ2011SGC035067

E-Mail -edepmrmsc-ri@nic.in

No. F-8(53) RMSC/EPM/M-5/17-18/NIB-269/2018 262

Dated: 19/11/18

CLARIFICATION/CORRIGENDUM/ADDENDUM

Subject: Date Extension of Bid document for THE RATE CONTRACT FOR EQUIPMENTS FOR RADIOLOGY HIGH FREQUENCY X-RAY MACHINE (100 mA, 300 mA, 500 mA and 100mA MOBILE)

In reference to subject cited above and NIB No. F-8(53) RMSC/EPM/M-5/17-18/NIB-269/5539 Dated 15.11.2017, the representations received from the various firms and issues raised by the Bidders, are examined by the competent Authorities and Technical Committee. The following Clarification/Corrigendum/Addendum is issued for inclusion in Bid document. Revised Bid Schedule & Amended Technical Specifications of Bid document of Item "**EQUIPMENTS FOR RADIOLOGY HIGH FREQUENCY X-RAY MACHINE (100 mA, 300 mA, 500 mA and 100mA MOBILE)**" as below:-

Description

1. Specifications of 100 mA High Frequency Fixed X-Ray Machine

High frequency X-Ray machine suitable for general radiography.

X-RAY GENERATOR:

- High Frequency generator of 20 KHz or more.
- Radiographic KV: 40 to 120KV.
- Output power: 6.0 KW
- mAs range: 100 mA or more.

CONTROL:

- KV Increase & Decrease Switches.
- mAs Increase & Decrease Switches
- Machine ON/OFF Switch.
- Collimator Lamp 'ON' Switch -on collimator side and control board.
- 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.
- Incoming Voltage Indicator. There should be provision for the machine to work from 195Volts Input supply to 265V input supply.
- Anatomical Programming Radiography (i.e. APR) should be provided in which KV and mAs are automatically selected depending upon the physique of the patient and part of the body to be X- Rayed.
- Anatomical Programming 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 Min.
- There should be inbuilt delay between the exposures to protect x-ray tube from over loading.
- A Hand Switch with Dual action for exposure Release with Retractable Cord is provided for Radiation Protection to the Operator.

X-RAY TUBE:

- One no. Dual focus Rotating Anode X-Ray tube thermally protected.
- Anode heat storage capacity of tube should be more than 100 KHU.
- One Pair of 8 meter H.V. Cable.
- One No. Collimator with auto shut off facility should be provided.

Blm

HV TANK:

- A very compact H.V. Tank filled with high dielectric transformer oil or Monoblock HT tank should be provided. The H.V. Tank should contain H.V. transformer, Filament Transformers, H.V. Rectifiers & H.V. Cable receptacles.

STAND:

- Stand should be Floor to ceiling stand with counter balanced tube head (rotatable ± 180 degree) 360 degree rotatable; mounted on floor ceiling rails for convenient movements.
- Company should provide chest stand with machine.

TABLE:

- The Table should consist of motorized reciprocating bucky with Imported Grid of size 17 $\frac{1}{4}$ " x 18 $\frac{3}{4}$ " & of Ratio 8:1 - 85 lines/inch.
- The Bucky should cover the entire length of the table and should be locked at any desired position by an Electromagnetic lock.
- The tabletop should be made of low radiation absorption, waterproof material.
- Table Accessories like stainless steel cassette tray, Compression band should be provided.
- Bucky should accept cassette upto 14" X 17"

POWER SUPPLY:

- 230V, AC, 50Hz. 15 Amps with line regulation of $\pm 15\%$. Line resistance < 0.4 ohms

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
No. | 1 |
| c) Cassettes with Image Intensifying screens of various Sizes
each (inch) :- 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 2 Nos. |
| d) One Packet of films of each size | |
| e) Film hangers for manual Processing for film
each
sizes (inch): 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 3Nos. |
| 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. CMC will be given @ 3% (of net rate exclusive of GST as applicable etc.) plus service tax (as applicable) and yearly escalation of 5 % on last year's CMC price. The rates of CMC may be awarded for seven years after guarantee.
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.**
11. **The Firm shall provide guideline and support to consignee, required to register online official Website eLORA(e-Licensing of Radiation Application).**

[Signature]



2. Specifications of 30KW High Frequency X-Ray Machine (300mA)

High Frequency X-Ray machine suitable for generator Radiography.

X-RAY GENERATOR:

- High Frequency X-Ray generator having frequency of 20KHz or more should be provided.
- Power output of generator should be 30 KW or more.
- Radiographic KV range should be 40 to 125 KV
- mAs range(RAD) 300 mAs or more
- Exposure time (Rad) 1ms to 5 Sec.

CONTROL:

A very compact, soft touch control panel having following function & indications should be provided. The panel can be supplied in floor or wall mount with spill proof design.

- Following features should be available on the control panel
- Machine ON/OFF switch
- Digital display of KV & mAs
- KV & mAs increase and decrease switches.
- Tube focal spot selection switch
- Ready & X-Ray on switch with indicators
- Bucky selection switch
- Self diagnostic programme with indicators for earth fault error, KV error, filament error and Tube's thermal Overload.
- 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.
- A dual action hand switch with retractable cord should be provided for Radiation Protection of Operator.
- There should be provision of auto shut off of Control if no key is pressed for 10mins.

X-RAY TUBE:

- One no. dual focus Rotating Anode X-Ray tube thermally protected
- Anode heat storage capacity of tube should be more than 140 KHU
- One Pair of 8 meter of H.V. cable
- One No. collimator with auto shut off facility should be provided.

HV TANK:

A very compact H.V. Tank filled with high dielectric transformer oil should be provided. The H.V. Tank should contain H.V. transformer, filament transformer, H.V. rectifiers & H.V. Cable receptacles.

TUBE STAND:

Floor to ceiling stand with Counter Balanced Tube Head (Rotatable + or - 180 Degree), 360 Degree Rotatable: mounted on floor ceiling Rails for convenient movement should be provided.

TABLE:

- Horizontal table with 4-way movement of the table top should be provided.
- Longitudinal movement of the table top should more than 400 mm & transverse movement should be more than 160mm. It should have height adjustment facility.
- The Table should consist of motorized reciprocating bucky with Imported Grid of size $17\frac{1}{4}$ " x 18 $\frac{7}{8}$ " & of Ratio 8:1-85 lines/inch.
- The Bucky should cover the entire length of the table and should be locked at any desired position by an Electromagnetic lock
- The Tabletop should be made of low radiation absorption, waterproof material.



- Table accessories like stainless steel cassette tray, compression band should be provided.
- Bucky tray should accommodate cassette up to 14" X 17 inch.

VERTICAL BUCKY STAND:

- Vertical bucky stand with oscillating Grid of ratio 8:1, 85 lines /inches is provided
- The bucky should move up & down & should be equipped with a stainless steel cassette tray
- The stand should be floor mounted type & can accommodate cassette up to 14" X 17".
- The Bucky is tilted in 6 steps of 15 degree angle each for various radiographs.

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
No. | 1 |
| c) Cassettes with Image Intensifying screens of various
each
Sizes (inch) :- 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 2 Nos. |
| d) One Packet of films of each size | |
| e) Film hangers for manual Processing for film
each
sizes (inch): 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 3Nos. |
| 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. |

POWER REQUIREMENT:

The unit should be operable on 3 Phase, 440 Volts AC 50Hz with line-resist less than 0.4 Ohms.
Line regulation + or - 10%

OTHER REQUIREMENTS

1. The manufacture 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. CMC will be given @ 3% (of net rate exclusive of GST as applicable etc.) plus service tax (as applicable) and yearly escalation of 5 % on last year's CMC price. The rates of CMC may be awarded for seven years after guarantee.
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.**
11. **The Firm shall provide guideline and support to consignee, required to register online official Website eLORA(e-Licensing of Radiation Application).**

3. Specifications of 40KW High Frequency X-Ray Machine (500mA)

High Frequency X-Ray machine suitable for generator Radiography.

X-RAY GENERATOR:

- High Frequency X-Ray generator having frequency of 20 KHz or more should be provided.
- Power output of generator should be 40 KW or more.,



- Radiographic KV range should be 40 to 125 KV
- mA range(RAD) 500 mA or more
- Exposure time (RAD) 1ms to 5 Sec.
- The x-ray control should have digital display of KV, mA and mAs.
- The radiography KV with maximum number of steps
- The techniques selector switch should be provided for selecting table radiography /bucky etc.

CONTROL:

- A very compact, soft touch control panel having following function & indications should be provided. The panel can be supplied in floor or wall mount with spill proof design.
- Following features should be available on the control panel
- Machine ON/OFF switch
- Digital display of KV & mAs
- KV & mAs increase and decrease switches.
- Tube focal spot selection switch
- Ready & X-Ray on switch with indicators
- Bucky selection switch
- Self diagnostic programme with indicators for earth fault error, KV error, filament error and Tube's thermal Overload.
- 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.
A dual action hand switch with retractable cord should be provided for Radiation Protection of Operator.
- There should be provision of auto shut off of Control if no key is pressed for 10 mins.

X-RAY TUBE:

- One no. dual focus Rotating Anode X-Ray tube thermally protected.
- Anode heat storage capacity of tube should be more than 140 KHU.
- One Pair of 8 meter of H.V. cable.
- One No. collimator with auto shut off facility should be provided.

HV TANK:

A very compact H.V. Tank filled with high dielectric transformer oil should be provided. The H.V. Tank should contain H.V. transformer, filament transformer, H.V. rectifiers & H.V. cable receptacles.

TUBE STAND:

Floor to ceiling stand with Counter Balanced Tube Head (Rotatable + or -180 Degree), 360 Degree Rotatable; mounted on floor ceiling Rails for convenient movement should be provided.

TABLE:

- Horizontal table with 4-way movement of the table top should be provided.
- Longitudinal movement of the table top should more than 400 mm & transverse movement should be more than 160mm It should have height adjustment facility.
- The Table should consist of motorized reciprocating bucky with Imported Grid of size $17\frac{1}{4}$ " X $18\frac{7}{8}$ " & of Ratio 8:1-85 lines/inch.
- The Bucky should cover the entire length of the table and should be locked at any desired position by an Electromagnetic lock
- The Tabletop should be made of low radiation absorption, waterproof material.
- Table accessories like stainless steel cassette tray, compression band should be provided.
- Bucky Tray should accommodate cassette upto 14" X 17 inch.

VERTICAL BUCKY STAND:

- Vertical bucky stand with oscillating Grid of ratio 8:1, 85 lines /inches is provided.
- The bucky should move up & down & should be equipped with a stainless steel cassette tray.

Bhargava

- The stand should be floor mounted type & can accommodate cassette up to 14" x 17". The Bucky is tilted in 6 steps of 15 degree angle each for various radiographs.

POWER REQUIREMENT:

The unit should be operable on 3 Phase, 440 Volts AC 50Hz with line resist less than 0.4 ohms. Line Regulation + or - 10%

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 No. | 1 |
| c) Cassettes with Image Intensifying screens of various each
Sizes (inch) :- 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 2 Nos. |
| d) One Packet of films of each size | |
| e) Film hangers for manual Processing for film each
sizes (inch): 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 3Nos. |
| 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. CMC will be given @ 3% (of net rate exclusive of GST as applicable etc.) plus service tax (as applicable) and yearly escalation of 5 % on last year's CMC price. The rates of CMC may be awarded for seven years after guarantee.
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.**
11. **The Firm shall provide guideline and support to consignee, required to register online official Website eLORA(e-Licensing of Radiation Application).**

4. Specifications of 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-on collimator side and control board.

- 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
- 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.

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 |
| c) Cassettes with Image Intensifying screens of various
each
Sizes (inch) :- 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 2 Nos. |
| d) One Packet of films of each size | |
| e) Film hangers for manual Processing for film
each
sizes (inch): 8" X 10", 10" X 12", 12" X 15", 14" X 17". | 3Nos. |
| 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. CMC will be given @ 3% (of net rate exclusive of GST as applicable etc.) plus service tax (as applicable) and yearly escalation of 5 % on last year's CMC price. The rates of CMC may be awarded for seven years after guarantee.
 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.**
 11. **The Firm shall provide guideline and support to consignee, required to register online official Website eLORA(e-Licensing of Radiation Application).**

2. Revised bid schedule:-

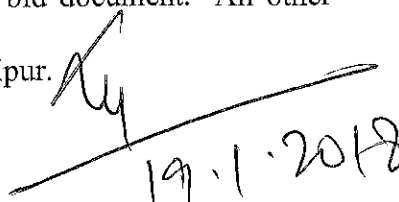
E-bids are invited as per following revised time schedule:-

Last date & time for sale of bid form	Last date & time of receipt of bid form	Date & time of opening of technical bid
<u>05.02.18</u> 01.00 PM	<u>05.02.18</u> 06.00 PM	<u>06.02.18</u> 03.30 PM

It is also clarified that above revised Bid Schedule information shall be communicated to all participating bidders on the website www.rmssc.nic.in and sppp.raj.nic.in. Please note that individual bidder will not be intimated."

Note: Please note that all above amendments/corrigendum in bid conditions is the integral part of (Section-V, Schedule of Supply, and Point no. 3) and the bid document. This corrigendum/ addendum should be signed and annexed with bid document. All other terms & conditions remains the same.

This bears the approval of M.D., RMSCL, Jaipur.


19.1.2018
Executive Director (EPM)
RMSCL, Jaipur

