


**DR. BHUBANESWAR BOROOAH CANCER INSTITUTE**  
**A Grant-in Aid Institute of Department of Atomic Energy, Govt. of India**  
**And a unit of Tata Memorial Centre (Mumbai)**  
**A. K. Azad Road, Gopinath Nagar, Guwahati -781016, Assam**  
**Tel: 09957033199/ 09957033212, Fax: 0361-2472636**  
**Email: bbci\_info@yahoo.co.in**

NIT No. BBCI-TMC/Equip-438/NIT/ 2895 - C / 2021

Date: 06/09/2021

**Tender Documents**

1. Notice for invitation of Tender  
 NIT for : **Medical Physics Equipment (Dosimetry items)**  
 NIT No. : BBCI-TMC/Equip-438/NIT/ **2895-C /2021**  
 Date of Publication : 06/09/2021  
 Last Date of submission : 05/11/2021 upto 2:00 PM  
 Opening of Technical Bid : 05/11/2021 at 3:00 PM
2. Instructions to the Supplier.
3. Tender Form - Application
4. Schedule of Specification of the item tendered and Compliance report on the prescribed form and on CD.
5. Conditions of the tender (General as well as Special)
6. Valid Letter of authority from the Principal to the Indian agent duly signed, executed and stamped
7. Undertaking for installation, commissioning and providing training to the nominated staff and replacement of spare parts / consumables and supply thereof during the warranty as well as maintenance contract period.
8. Disclosure of existing customers to whom supply of equipment / service made available in India.
9. Certificate that only price bid (6 forms) are attached.
10. Commercial Offer form – Price Bid terms for arriving at lowest commercial bid.
11. Commercial offer /Price bid format of BBCI, Guwahati.  
 Vendor to submit BOQ without mentioning price in the technical bid.

  
 Senior Administrative Officer  
 Dr B Borooah Cancer Institute

**Instructions to Suppliers**

Suppliers are requested to take note of the following instructions while filling the Tender form for submission of Technical and Commercial offer:

1. The tenderer should furnish the full contact details such as recent phone nos., mobile nos., email id, mailing address, office address which will be in operation for a period of two years. BCCI will send all communication preferably by e-mail. Non receipt of communication will not be our responsibility. So tenderer must ensure correct and operational email ID and fax Nos. If any changes in contact details, then ensure to submit to BCCI.
2. The bidder should be having a legal entity either of individual/partners or a body corporate which may sue or may be sued in India jurisdiction.
3. The bidder should be competent enough to deal with the business of the tendered item technically and financially and should have adequate man-power having prescribed qualification (Skilled & Technical) required for managing the business
4. The bidder should have necessary license under the prevailing laws of the land and competent to undertake import and export process of goods and services.
5. The bidder should have tax payment capability by producing 3 years Assessment Clearance Certificate as and when asked for in addition to PAN and TAN No.
6. The bidder should provide GST No. and License No. as may be required for manufacturing of item and/or import from foreign origin.
7. Experienced bidder should attach certificate of their past experience in support of their capability in the field of dealing with the item tendered.
8. The successor / heirs in office will be responsible for the liabilities created by the bidder in respect to the item / services offered by bidder.
9. The risk of loss in transit of the goods / services shall be the responsibility of the bidder.
10. The bidder will be solely responsible for the activities, and if found fraudulent on the part of principal to cheat or swindling the Indian public by way of advance payment or breach of terms and condition of L/C established for import of tendered item.
11. The bidder will be responsible for abiding with international laws including rules relating to package etc. applicable to the item / services offered by the bidder.
12. The bidder will be responsible for ensuring compliance with international standards before the consignment of the item is dispatched from the godown of manufacturer of foreign origin to deliver into India at the place of the user.
13. The bidder will be responsible for safe transit of the goods under proper goods insurance coverage and under standard / appropriate conditions.
14. The bidder will be responsible for all the consequences legal or administrative with regard to the persons involved in erection, installation, commissioning & maintenance for compensation in case of any damage occurred to them while execution of the work.
17. The bidder will be under obligation to intimate to institute in advance about the assistance to be extended by the institute without involvement of expenditure or at the cost of the bidder in connection with the process of erection installation and commissioning.

18. The bidder is responsible for installation and commissioning of the equipment without damaging infrastructural image/face of our building/installation site. Temporary destruction and re-construction of existing structure in connection with the site preparation and installation of the equipment will be the vendor's responsibility. Charges/expenses involved for the same shall be borne by the supplier. If any damage takes place while the work is in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work, the bidder shall make good the same at his own cost.
19. The bidder should obtain clearance from structural consultant before starting the work (wherever applicable).
20. The bidder should ensure that the technical bid complete in all respect should be sealed in a separate cover and commercial/price Bid should be sealed in separate cover and both the envelopes should be kept and sealed in a suitable size cover which should be superscribed with name of the equipment, **tender No. & the EMD receipt number and date.**
21. The bidder is also advised to ensure that the Commercial offer and the Technical offer papers are signed by the authorized persons and rubber stamp should be put wherever asked for.
22. The offers should be submitted within the scheduled time limits and delay if any occurred in submission on account of any reason whatsoever shall not be condoned and such delayed offers received late shall be liable for rejection.
23. The bidder or his authorized representative will be entitled to participate in the tender opening Process to take note of the proceedings of disclosure.
24. Any change in policy decision made by the BBCI management before awarding the contract will be binding on the vendor.
- 25. Conditional & incomplete offers will not be accepted.**
26. The Director, BBCI reserves the right of cancellation, adding, reducing or deferring the purchase without assigning any reason thereof at any stage in the processing of tenders received and no claim in this behalf from any tender in any way shall be entertained/tenable/entitled for compensation in one way or the other. In such case of cancellation the bidder will be refunded with the earnest money deposit without any payment of interest of original EMD receipt. The Director, BBCI on enquiry will disclose the reasons for rejecting a tender or non issuing a tender document.
27. Queries (if any) from the vendor on the terms & conditions / technical spec in the tender should reach to the Purchase Dept. of the Institute **on or before 08/10/2021** via e-mail '**bbci\_info@yahoo.co.in**' for clarification, etc. Such queries / request for clarification from vendors after 08/10/2021 will not be entertained.

Certified that I have read the above instructions carefully and taken note of them.

**Signature**

**Name of authorized person for bidder with seal**

**DR. B BOROOAH CANCER INSTITUTE  
A.K. AZAD ROAD, GOPINATH NAGAR  
GUWAHATI-781016, ASSAM**

**TENDER FORM  
Application**

Ref : Tender No :

Date :

1 Name of the Item / Work	
2. Due Date of the submission of the tender.	
3. Receipt No. for EMD Amount and Date	
4. Name / Title of the Bidder	
5. Full Address (recent)	
	E-Mail (recent)
	Tel. No & Mobile No. (recent)
	Fax (recent)
6. Name of the person authorized to deal / undertake business for and on behalf of the bidder	
	Tel. No & Mobile No. <b>(Recent)</b>
	Fax <b>(Recent)</b>
	E-Mail <b>(Recent)</b>
7. Legal entity of the bidder whether Firm / Society / Company / Other entity	
a. Registration No.	b. Authority with whom registered
c. License No. granted by	for
8. Main business of the bidder whether Manufacturer, Business Distributor, Wholesale Dealer, Retail trader or Service Agent	
9. Authorized Area of operation in India	
10. Name of the Principal Organization / Company for and on behalf working in India	
11. Origin of the Principal Organization / Company	
12. Address of the Principal Organization / Company	
	Tel. No. & Mobile No.
	Fax
	E-Mail

13. Name & Address of the Bankers of the bidders.	
14. Authority / Delegation / Licence No. & Date granted by the principal to the representative bidder	
15. PAN No. TAN No.	
16. Registration No. granted by Central Excise Commissioner for Service tax	
17. CST No. / VAT No. / ST No.	
18. Central Excise License No.	
19. Import / Export Code No. License No. for import	
20. No. of manpower employed by the bidder	a. Scientific                      b. Technical c. Administrative                d. Finance
21. Support facility equipment No.	
22. Experience of the bidder in dealing with the tendered item. Tenderer must have similar job done in the line of business / experience with 3 to 5 years will be considered	
23. Whether supply of any item / service to BCCI / TMC in past; if yes indicate the Purchase Order No. & Date	
24. Any other relevant information for submission	

Certified that the above information is correct & true to the best of my knowledge and belief. Nothing has been concealed and fabricated and in case any information is found incorrect. I, the under signatory will be personally responsible.

**Signature**

**Name of authorized person for bidder with seal**

Date:

**TECHNICAL COMPLIANCE FORMAT**

Serial # 4

**Technical Specification for supply & installation of “Dosimetry Items – Medical Physics Equipment”**

Sr. No.	BBCI tender specification	Technical offer of the bidder	compliance	
			Yes/ No	Remarks

**DR. B BOROOAH CANCER INSTITUTE  
A.K. AZAD ROAD, GOPINATH NAGAR  
GUWAHATI- 781016**

**GENERAL & SPECIAL CONDITIONS OF THE TENDER**

1. Tender will be submitted or dropped in the drop box available in the purchase department in Two Bids in sealed cover super scribed with Tender No. **“BBCI-TMC / Equip-438 /NIT / 2895-C / 2021 dtd. 06/09/2021”** for the following **“Dosimetry Items – Medical Physics Equipment”**.

Sl.No.	Equipment	Quantity
A	Ion Chamber for absolute photon dosimetry	02 (two)
B	Plane parallel ion chamber	01 (one)
C	Pin-point ion chamber / Samall volume ion chamber	01 (one)
D	Unshielded Diode Detector	01 (one)
E	Imported Electrometer for diode detector	01 (one)
F	Winston-Lutz QA Kit	01 (one)
G	Lucy 3D QA Phantom	01 (one)
H	1D Motorized Water phantom	02 (two)
I	2D Water Phantom	02 (two)
J	Reference class imported – (Non PC based) Electrometer	02 (two)
K	Local made water phantom	02 (two)
L	TPR20/10 Phantom	02 (two)
M	Water equivalent slab phantom	02 (two)
N	Dosimetry Cables	04 (four)
O	Connection Adaptor / converter	02 (two)
P	Patient Specific QA system for IMRT, VMAT & SRS/SRT	01 (one)
Q	Digital Barometer	02 (two)
R	Analog thermometer	02 (two)
S	GafChromic Dosimetric Films (Type: EBT-XD)	01 (one)
T	GafChromic Dosimetric Films (Type: EBT-3)	01 (one)
U	Ready-pack Radiographic Film (Type : EDR2)	01 (one)
V	Advance Electron Density Phantom	01 (one)
W	Thermoluminescence Reader System	01 (one)

The tender should contain the technical bid and the commercial bid which would be received **on or before 05/11/2021** in the **Administrative Department**, BBCI, at Guwahati-781016 **up to 2:00 PM. Technical Bids will be opened on 05/11/2021 at 3:00 PM** in the presence of the attending bidders. Time and date of opening of the Price Bid will be intimated only to the bidders who are technically qualified after evaluation of the Technical Bid.

**2. Tender Document Fee**

The tender document may be obtained during the office hours from the office of the Director, Dr B Borooah Cancer Institute on payment of **Rs.700/-** plus applicable GST (non-refundable) **either in cash or by A/c payee Demand Draft or banker’s cheque** drawn in favour of **‘Dr. B. Borooah Cancer Institute, Guwahati-16’**. **Photocopy of the document in support of the payment of the tender fee is to be submitted along with the Part-I of the tender invariably.**

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The detail tender documents can also be downloaded from the website of the Institute <http://www.bbcionline.org/tenders.php>. The tender document downloaded from the website will be accepted only on furnishing of non-refundable tender fee in the form of crossed Demand Draft / Banker's Cheque of **Rs.700/-** plus applicable GST separately drawn on any nationalized bank in favour of 'Dr. B. Borooah Cancer Institute, Guwahati.' Tender document charges for the tender forms downloaded from our website to be paid by DD in favour of Dr Bhubaneswar Borooah Cancer Institute **and should be enclosed in the Part-I Technical Bid of the tender documents.** The Tender Document Fee DD number and date should be mentioned on the envelope.

3. **Earnest Money Deposit** :

An Earnest Money Deposit of **Rs.2,25,000/-** (Rupees two lakhs twenty five thousand) **is to be paid** by DD in favour of Dr Bhubaneswar Borooah Cancer Institute **and should be enclosed in the Part-I Technical Bid of the tender documents.** The EMD DD number and date should be mentioned on the envelope.

4. **The bids received without paying the tender document charges and EMD charges shall not be considered.**

5. The technically suitable offers shall be shortlisted and the commercial bid will be opened of such technically successful bidders only.

6. The concept of lowest commercial offer will be accepted subject to technical suitability.

7. The successful bidder will have to enter into an Agreement for the contract of supply, installation, commissioning and maintenance of the equipment including the supply and availability of the spare parts.

8. Successful bidder will be issued with a Letter of Intent if required which will be followed by a Purchase Order.

9. The bidder will also be under obligation to submit the technical specifications & Compliance of the specified item not only in the form of hard copy but also on CD detailing on the left side components and their technical specifications in the prescribed format.

10. A complete product catalogue, literature/publication/user information paper should be submitted in the Technical Bid along with the design, drawing etc. including the weight, volume and size of the equipment.

11. The bidder may separately quote and submit for other variants including those which are work in progress and likely to be marketed in the next couple of years, if they satisfy the requirement for the specified item / equipment.

12. The bidder will also have to certify that the equipment proposed to be supplied is not obsolete and that no new variants are likely to be marketed in the next 2 years. Vendor is responsible to maintain the equipment till the end of its life.

13. The bidder will have to submit the certificate of Disclosure stating that the Model has been supplied to the users with their details i.e. Name, Address and Tel. No. & E-Mail.

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14. The bidder will be under obligation to provide training free of charge to the person/s deputed by the hospital for learning of operations and techniques and maintenance thereof in India or abroad as the case may be. The drawing schedule has to be specified in the technical bid.
15. Compliance to National standards of the country of origin of the manufacturer should be certified by the bidder.
16. Literature/Certificate containing the information of the life of the equipment should also be submitted. This criterion is very important and to be noted as a special condition for the tender acceptance.
15. The replacement of defective parts during the warranty period shall be **sole** responsibility of the supplier and the Indian agent will be solely responsible for replacement at their cost including the down time liquidation damage, **customs duty, octroi if applicable** etc. be noted as a special condition of the tender.
16. Replacement of 10% of spare parts in a period of **first year** will amount to the supply of defective equipment and the Principal company/ Indian agent shall be under obligation to replace the entire equipment at their cost.
17. The Indian agent / supplier shall be under obligation to ensure that the delivery of the item / equipment shall be treated as completed only on installation of the equipment on site/place decided by the hospital and commissioning is done at the entire satisfaction of the authorized officer / user scientist. In case the equipment or the item is to be shifted from the place on which it was off-loaded to the site of installation & commissioning, it shall be the responsibility of the agency and no cost in this regard shall be payable by the hospital.
18. The principal supplier or their Indian agent shall be responsible for making the consumable / spares available throughout the life of the equipment at the prescribed discounted rate as may be mutually agreed by the user and denial or non-supply of required consumable / spares shall render the Indian agent liable for liquidated damages under the contract.
21. Technical strength of the bidder for providing supply, installation and commissioning and maintenance thereafter will be the one of the most important criteria for technical suitability.
22. The bidder has been authorized to inspect the site for installation of the equipment without payment of visiting fees to the Institute before submitting its tender, if found necessary, with prior permission.
23. The compliance report shall be properly filled up and duly signed.
24. Each and every page of the technical offer as well as the commercial offer to be submitted separately should be signed and sealed. No overwriting is permissible and such document having correction is liable to be rejected. However, cutting will be permissible on attestation by the authorized person.
25. If any dispute arises out of the transaction in any manner that shall be resolved by the sole arbitration which shall be appointed by the Director, BBCI. Director-BBCI shall be the final and sole arbitrator who shall undertake the exercise of arbitration to resolve the dispute and such award as may be given by Director-BBCI shall be final and binding on both the parties.

26. The Indian supplier on behalf of its Principal supplier / manufacturer of foreign origin shall be under obligation to inform the user from time to time about the innovations / changes made by the manufacturing company in the technique or the program of software to be used in the equipment by way of advancement and will be free to suggest for adoption of the changes at the lowest expenditure as may be acceptable to the users.
27. The damages if occurred to the item / equipment during transit up to its installation and commissioning shall be taken care by the supplier / Indian agent either himself or through second party obligation by way of goods insurance to be arranged with a reputed goods insurance company preferably Indian company. In case an insurance policy taken from insurance company of foreign origin that shall be the responsibility of the supplier / agent and no obligation will be there on the part of the purchaser and every step whatever is required to be taken shall be initiated and taken by the agent. The vendor has to arrange **Insurance till installation and commissioning of the equipment.**
28. **Forfeiture of the EMD:** If for any reason whatsoever any bidder withdraws his bid at any time prior to expiry of the validity period or after issue of the Letter of intent /work Order, Purchase order, refuses to execute the work order/ Purchase order or furnish the Performance Guarantee/Security Deposit for faithful Performance of the contract within the stipulated time, the amount of EMD shall be forfeited to BBCL.
29. Those vendors who have paid Security deposit / Performance bank guarantee must be taken back by the vendor within 3 months of expiry period. If not collected within 3 months the expired Bank Guarantee shall be destroyed.
- Refund of E.M.D.**
- a) EMD of the successful tenderer shall be refunded after the receipt of installation certificate and 10% Performance Bank Guarantee.
- b) EMD furnished by all unsuccessful tenderers will be returned as early as possible after the expiry date of validity of their offer but not later than 30 days of award of the contract.
30. If the tenderer is not capable of quoting particular item Tenderer should clearly mention in the Technical bid in the compliance report. For the cases where the compliance report the tenderer not mentioned anything then management shall presume that it is inclusive of the cost quoted by the tenderer.

## PART-I

### TECHNICAL BID

1. Tenderer name, address of headquarters, telephone number, fax number, and website
2. Tenderer contact name and title, address, telephone number, fax number, e-mail address and resume/CV
3. List of tenderer senior management and directors with brief resumes
4. Does the tenderer qualify as a diverse business? If yes, include a copy of relevant certification.
5. How many years has the firm, in its present form, been in business?
6. Describe tenderer's form of corporate organization and corporate governance with supporting documents. List and briefly describe lines of business.
7. (i) How many employees does the firm employ locally –  
(ii) How many nationally –  
(iii) How many internationally –
8. Describe authorization and signature process within the tenderer for any agreement that might result from this RFP. Identify the personnel authorized to sign contracts for the firm.
9. Provide audited financial statements for the past three (3) years and most current interim statements with any recommendations made by external auditors and discussion of any significant subsequent events or changes since the interim statement.
10. The bid should include the following:
  - Copy of PAN No.,
  - Copy of GST No.,
  - Income Tax Returns for last three years.
  - Latest Letter of Authority from the manufacturer if the supplier is dealer or agent of the firm.
  - Vendor Capability Proforma duly filled in.
  - **Declaration from foreign agency whether they have a Permanent Establishment or dependent agent in India or not.**
  - *TRC (Tax Residential Certificate) of foreign party (Principals)*
  - *PAN No. of the foreign agency*
  - *Certificate of country of origin of the goods and services offered, to be confirmed by a certificate of origin at the time of shipment.*
11. ***Technical compliance in the enclosed format at Serial No#4***
12. Please identify and describe any significant outstanding or settled legal or non compliance matters for the previous 5 (five) years, including any penalties levied on the tenderer for defaults of any kind, by courts of law/ regulatory authorities. This is restricted to business involving the tenderer equipment only.
13. Has the company been cited for or does the company have business activities that contribute to the violation of human rights? If yes, describe in detail.

**14. References**

Provide a minimum of four references (preferably hospitals) including client name, address, contact person, phone, contract period, and scope of services provided.

**15. Terms and financing**

Quoted prices must be valid for at least 180 days (extendable by 3 months at the request of purchaser) from the date the RFP responses are due.

**16. Quality**

Service and quality are extremely important to the success of BBCI. Describe how the tenderer will monitor the service and quality of products and services provided.

17. **Network (if any)** – The requirement of network facility is different for every equipment. Please attach the separate annexure as per the requirement of installation site and vendors to visit the site before submission of tender documents. We need open network facility that has free talk with all available machines.

18. In case the offer is submitted by an Indian Agent on behalf of foreign principal, the following documents should be submitted failing which their offer is liable to be ignored:

- a) Photocopy of agency agreement between foreign principals and Indian agent showing the percentage or quantum of agency commission and a letter of authority authorizing them to submit tender on their behalf.
- b) The type and nature of after sales service to be rendered by the Indian Agent.

19. The bidders having their warehouses/service center and facilitation center nearby will be desirable and advantageous for attending the calls to reduce the down-time.

**20. At the time of opening of Part –I Technical Bid if a tenderer has included price or any other charges in Part –I or has failed to submit Part-II separately in a sealed envelope, such tenders will be disqualified. The tender opening officer shall make a clear mention regarding the above aspects on the front page of the tender.**

## PART - II

### COMMERCIAL BID

1. In the price bid tenderers should ensure to quote the prices in the prescribed form. **If a firm quotes “Nil” charges / consideration, the bid shall be treated as unresponsive and will not be considered. (as per Rule 160 (xiv) of General Financial Rules 2005 vide DAE letter No. 1/5(3)/2012-Budget/ 2483 dated February 20, 2014).**
2. The detailed price of the equipment should be quoted in Part II of the tender in separate envelope indicating:
  - a) Ex-works cost of the entire equipment with 2 years of warranty and **essential** accessories and optional accessories separately.
  - b) F.O.B. cost (including handling, inland freight & documentation charges) of the entire equipment and **essential** accessories and optional accessories separately.
  - c) The freight & insurance charges (up to installation, commissioning and testing).
  - d) Total amount of the equipment on **Dr B Borooah Cancer Institute, Guwahati**
  - e) The delivery period of the equipment and the time required for installation / commissioning of the equipment must be mentioned.
  - f) The offer would be **Dr B Borooah Cancer Institute, Guwahati** as per the International Commercial Terms, applicable at present. All essential spares, consumables, labour and any other incidental costs required for delivering the equipment up to the site of installation and for the startup of the equipment must be included in the commercial bid.
  - g) In case the offer is in INR – terms of supply shall be FOR Destination including applicable taxes duties, government levies (taxes and duties shall be indicated separately).
  - h) It shall be responsibility of the tenderer to arrange for customs clearance and delivery of equipment at his own cost, risk and consequences. However, at the time of clearance, online custom duty will be paid by BCCI. The vendor has to confirm the custom duty amount in time.
3. **Validity :** The tender shall be valid for a period of **180 days** from the date of the opening of the technical bid. Validity of the tender shall be extended if required.
4. **Mode of Payment :**
  - a) **Terms of payment for offer in foreign currency:** Unconfirmed irrevocable letter of credit for 100% payment. All bank charges within India to buyer's account and Outside India it will be on the sellers account. 80% payment will be released through Letter of Credit on receipt of all required original documents. Balance 20% payment will be released on i) successful installation and commissioning ii) acceptance and certification by the user dept. and iii) submission of 10% performance bank guarantee in INR for warranty period plus three months from date of installation.
  - b) **Terms of payment for offer in INR :** 80% payment against delivery at purchase's site and preliminary inspection and balance 20% after commissioning and final acceptance and submission of 10% performance bank guarantee in INR for warranty period plus three months from date of installation.
5. **Warranty : 2 YEARS WARRANTY AND 8 YEARS CMC**  
**Warranty period and terms of warranty including accessories, details of preventive / periodic maintenance, frequency and task description must be specified.** Vendors are required to provide 02 years warranty **plus quote separately for 8 years CMC** after the warranty period. CMC charges shall be quoted exclusive of taxes (if any). Tenders not confirming to this clause are liable to be rejected. CMC shall cover the entire scope of supply without any exclusions.

**6. Uptime Guarantee:**

The supplier and/or its Indian agent will be required to give the guarantee towards the performance of the equipment during the warranty period and in case of comprehensive annual maintenance contract period for maintaining the equipment in good working condition for a period of at least 300 days out of a period of 365 days a year (i.e. 95% uptime) 24X7.

The ten hours non-functioning of the equipment or any part thereof will be considered as one day down time. Total 3000 hours in a year will be considered as Uptime guarantee. Working time is 8.00 a.m. to 6.00 p.m. on week days and 8.00 a.m. to 4.00 p.m. for Saturdays. The equipment shall be fully functional as part of the uptime and if it is partly functional it shall be considered as downtime and deduction shall be made on Pro-rata basis i.e. if the equipment is 70% functional 30% downtime shall be applicable. The decision of the BCCI management or its representative in determining the % of the downtime shall be final and binding. Essential period to shut down the installation entirely or partially shall also be included in the down time while calculating the 95% guaranteed uptime i.e. all features as per specifications in purchase order should be functional for uptime. The supplier / agent shall be required to pay a penalty Rs.3,000/- per hour per machine excluding 150 hours permissible downtime. This rate shall increase commensurate with the rate increase of CMC. If the number of days downtime in each period of 365 days is more than the downtime permissible (which is to be calculated as defined above), the delay for not bringing the equipment in functioning order in any way, directly or even partially will be attributable to the firm. The bidder should provide the details of preventive maintenance to be undertaken through the year. Preventive maintenance to be done on holidays only. Preventive maintenance and breakdown will not be clubbed. The bills should be raised quarterly and will be paid at the end of every quarter only.

**7. Spares parts (Applicable for AMC):**

The supplier / Indian agent will be under obligation to provide the price list of all the spare parts required to be replaced after warranty period and should certify that the rates indicated in the price list shall be applicable for the period of **8 years** after the warranty period.

**8. Consumables :**

- a) Consumables as may be required for installation, commissioning, start up and trial runs shall be supplied by the supplier with the equipment without any extra charges.
- b) The price list of such consumables which shall be required for running of the equipment thereafter shall be submitted with validity for the period of 2 years warranty and **8 years** thereafter.
- c) Consumables not covered under CMC shall be listed separately and prices either in INR or foreign currency shall be indicated during the period of CMC.

9. **Liquidated damages** : In event of failure to supply within the stipulated delivery period, the purchaser reserves the right to levy liquidated damages @ 2% per month or part thereof for the delayed supplies.

10. The amount / rate of taxes as may be levied should be indicated separately in the commercial offer.

11. The term “without charges or free of cost” will imply as providing goods or services to the purchaser at no extra charges/cost including tax liability thereon and that the Octroi exemption will not be provided.

## **Special General terms and conditions :**

Please refer page **serial # 10** regarding conditions to identify the lowest tenderer.

1. Network (**if any**) – The requirement of network facility is different for every equipment. Please attach the separate annexure as per the requirement of installation site and vendors to visit the site before submission of tender documents. We need open network facility that has free talk with all available machines.
2. **Please quote all the models including state of the art. Bidder not quoting their high end model shall be rejected.**
3. Queries (if any) from the vendor on the terms & conditions / technical spec in the tender should reach to the Purchase Dept. of the Institute **on or before 08/10/2021** via e-mail '**bbci\_info@yahoo.co.in**' for clarification, etc. Such queries / request for clarification from vendors after 08/10/2021 will not be entertained.
4. BBCI reserves the right to purchase all OR any of the quantities tendered.
5. Delivery site:  
**1) DR. BHUBANESWAR BOROOAH CANCER INSTITUTE, A. K. AZAD ROAD, GOPINATH NAGAR, GUWAHATI-781016**
6. Conditional & incomplete offers will not be accepted.
7. Offers with conditions / ambiguity shall be liable to be rejected.
8. Rules and regulations of BBCI will be deemed to have been incorporated in this tender and shall form part of the contract.
9. Tenderers having a services centre locally will be preferred.
10. The tenderer /contractor/company should furnish along with tender an affidavit duly notarized on Non judicial stamp paper of Rs.100/- affirming as under:
11. That the firm or any of its Directors/ partner / proprietor / Agent, is never blacklisted/penalized/defaulted/disqualified by any government institution/ Hospital or Court of law or any Regulatory Authority within last 5 years or that no such action is pending or in process within last 5 years. The price quoted is the lowest for the configuration quoted.  
  
Registered company shall furnish CIN No. as well as DINs of Director, and shall update the information from time to time. Director's office and permanent residential address shall be furnished.  
  
N.B. The affidavit must be as per the details mentioned above. Any change in the text matter is not accepted and BBCI reserves the right to reject such offers.
12. Tenders / offers with conditions like discount / rebate / waiving off some charges etc. Subject to some condition will not be considered.
13. **At the time of opening of Part –I if a tenderer has included price or any other charges in Part –I or has failed to submit hardcopy / print copy of Part- I (Technical Bid) in a sealed envelope, such tenders are liable to be disqualified. The tender opening officer shall make a clear mention regarding the above aspects on the front page of the tender.**

Certified that I have gone through the above stated general as well as special terms and conditions of the tender and taken note of them for compliance in toto.

Signature

Date :

**Name of authorized person for bidder with seal**

*To be printed & executed on Letter head of the principal supplier/manufacturer of the equipment of foreign origin*

**LETTER OF AUTHORIZATION**

I, Mr. \_\_\_\_\_ Chairman / Managing Director / President / Vice-President / General Manager hereby certify and declare that M/s. \_\_\_\_\_ having its registered office at \_\_\_\_\_ is an organization dealing with the manufacturing and assembling of the equipment \_\_\_\_\_ which is meant for scientific use for research/diagnostic/treatment and having business operations in India.

It is also certified that our representation and operations in India is done & executed by M/s. \_\_\_\_\_ which is a organization constituted under the provisions of \_\_\_\_\_ and having their registered office at \_\_\_\_\_ who has been fully authorized by us to act as our representative in whole or part of India to deal, undertake, participate in the business proceedings, quote rate for supply, installation, testing and commissioning, after sales services of our products / equipment's and their spare parts together with consumables and procure purchase orders to pass to us on such rates and conditions as may be negotiated by them for and on behalf of us.

The Indian Agent M/s. \_\_\_\_\_ has also been authorized to provide after sales services, supply spare parts and consumables on the authorized rates as indicated in the price list of the company for the period of the currency of warranty and Comprehensive annual maintenance contract thereafter for a period of 8 years. They have also been authorized to negotiate the rate for allowing special discount to the hospital.

**Signature**

**Name of authorized person for bidder with seal**

Date :



*To be printed & executed on Letter head of the supplier company / Indian agent*

**UNDERTAKING**

To,  
The Director,

1. I, the under signatory hereby undertake to supply, install and erect, testing & commission and maintenance of the equipment namely \_\_\_\_\_ for and on behalf of bidder on agreed terms and conditions as have been stipulated and mentioned in the Purchase order on acceptance of my offer for the above equipment / item.
2. I, the undersigned also hereby undertake to assure and promise to provide the spare parts within reasonable time for operation of the aforesaid equipment without any charge during the warranty period of 2 years and thereafter I will make available all the spare parts and consumables on the agreed price during the period of annual maintenance contract at least for the period of 8 years from the date of completion of the warranty period at the negotiated rate allowing discount on the price list of the company, authenticated copy of which will be submitted for your record.
3. Further also, I undertake to assure and promise to provide technical operational training to the scientific and technical staff members of the user Institute without any charge after commissioning of the equipment and condition thereof. In case training experts are not available in India the necessary operational training not exceeding to one week shall be arranged by the manufacturing company of the equipment in the manufacturing / assembling unit of the equipment in the foreign country of origin.

**Signature**

**Name of authorized person for bidder with seal**

Date :

*To be printed & executed on Letter head of the supplier company / Indian agent*

**Schedule of disclosure of existing customers to whom supply of similar equipment / service made available in India**

CERTIFICATE

This is to certify that M/s. \_\_\_\_\_ having manufacturing factory / unit at \_\_\_\_\_ and having registered office at \_\_\_\_\_ is a company registered and incorporated company under the Law of the land of \_\_\_\_\_, is our the principal company manufacturing the equipment namely \_\_\_\_\_. The said equipment has been supplied, installed and successfully commissioned with the users as are listed with their addresses in annexure hereto.

This is also to certify that we have not supplied above named equipment to any of the users in India at the cost less than the price quoted by us to Director, BCCI, within the period of last six months.

**Signature**

**Name of authorized person for bidder with seal**

Date :

*To be printed & executed on Letter head of the supplier company / Indian agent*

**CERTIFICATE**

This is to certify that the price bid contains only Form No. **Serial # 11**. And there are no other values and conditions attached.

**Signature**

**Name of authorized person for bidder with seal**

Date :

**COMMERCIAL OFFER / PRICE BID (terms for arriving at Lowest commercial bid)**

**Name of the equipment : "Dosimetry Items – Medical Physics Equipment".**

**Total cost of equipment for a period of Ten years.**

**10.1 Following points shall be considered for arriving at the lowest quoted bidder amongst the technically acceptable offers. :**

**10.1.2 The total cost of equipment shall be calculated as under:**

The total cost of equipment for comparative purpose shall be calculated as under:

- For foreign currency quote CIF cost of the equipment with standard & essential accessories CIF value converted in INR (conversion factor of the day when the financial bids are opened will be considered) + applicable taxes, duties, govt. levies as imposed from time to time + clearance charges + 2 years warranty + 8 years CMC – Buyback offer (if any).
- For INR quote FOR Destination basis which shall be inclusive of applicable taxes, duties, govt. levies etc. without octroi will be considered + 2 years warranty + 8 years CMC – Buyback offer (if any).
- **Total cost shall mean and include all taxes, duties and levies by Government for total qty. 1 No.**

10.1.3 If the CMC values are not mentioned, then offer will be disqualified.

10.1.4 Tenderers are strictly advised to submit price bid in the enclosed prescribed format.

10.1.5 Prices / discounts offered by the vendors must be unconditional and without ambiguity.

**10.1.6 Special General terms and conditions:**

**10.1.7 Please quote all the models including state of the art. Bidder not quoting their high end model is liable to be rejected.**

10.1.8 BBCI reserves the right to purchase all OR any of the quantities tendered.

10.1.9 Conditional & incomplete offers will not be accepted.

10.1.10 Rules and regulations of BBCI will be the part of contract.

## COMMERCIAL OFFER / PRICE BID FORMAT – PART II

i) Name of the equipment : “Dosimetry Items – Medical Physics Equipment” for BBCI, Guwahati

Name of the item/equipment/ service (complete in all respect i.e. Basic equipment with necessary accessories and consumables) \_\_\_\_\_

Sr. No.	Particulars	Quantity	Unit Rate (indicate currency clearly)	Amount (indicate currency clearly)
1.	Ex-works cost of the <b>complete</b> item with <b>2 year of warranty</b> (including training as per tender)			
2.	Discount offered on the price of the basic equipment			
3.	Add : Inland handling, Packing and forwarding charges upto the Port of shipment/boarding			
<b>4.</b>	<b>Total FOB cost BBCI</b>			
5.	Agency Commission charges to be paid to Indian agent (if any to be paid in Indian rupees)			
6.	Freight & Insurance charges etc. from the country of Origin to the port in India			
7.	<b>Total CIF Price, BBCI</b>			
8	<b>INR price for indigenous supply (if any)</b>			
9.	Comprehensive Maintenance charges (CMC) for the period of 8 years payable periodically after warranty ( <i>exclusive of taxes</i> ) ( <b>No exclusion</b> ). CMC charges should be quoted in INR only. <i>Net of discounts</i>			
10	Total cost of equipment for 10 years (excluding customs duty) for arriving at L1 (i.e. Equipment cost with 2 year warranty and 8 years CMC charges)			
11	Customs duty and other statutory levies to be added by the Purchaser ( <b>not to be filled by the tenderer</b> )			
12	Shifting charges from the place of off-loading i.e. airport / seaport in India to the place of installation (e.g. clearing charges, insurance charges in India etc.) to be added by the Purchaser ( <b>not to be filled by the tenderer</b> )			
<b>13</b>	<b>Total cost of equipment (Sl.No.10 + 11 + 12) to be taken for arriving at the final price (after converting the currency to INR)</b>			
<b>14</b>	Site preparation charges, if any (in INR) (will not be considered for arriving at lowest tender)			

Signature

Name of authorized person for bidder with seal

## Schedule – I

### Technical Specification for supply, installation & commissioning of “Dosimetry Items – Medical Physics Equipment”.

Please quote the standard warranty and AMC prices up to 10 years from the date of installation after warranty		
Sl. No.	Name of Equipment	Technical Specifications
<b>A</b>	<b>Ion Chamber for absolute photon dosimetry (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Chamber type	Farmer Type
4	Latest calibration and validity	please specify
5	Chamber collecting volume	0.6 cc
6	Measuring Quantities	Absorbed dose to water, air kerma & exposure
7	Chamber design	Waterproof, air vented, fully guarded
8	Outer wall material	Graphite
9	Reference beam quality	Co-60
10	Anode material	Aluminium
11	Nominal photon energy range	<b>Preferably 50 kV to 20 MV</b>
12	Polarity effect	Please specify
13	Leakage current	<b>Typically in the range of <math>10^{-15}</math> A</b>
14	Directional response of chamber	Preferably negligible
15	Stem leakage	Please specify
16	Cable leakage	Please specify
17	Signal stability	Please specify
18	Ion collection efficiency	Please specify
19	Chamber voltage range	Please specify
20	Temperature range	Please specify
21	Humidity range	Please specify
22	Air pressure	Please specify
23	Buildup cap dimension and material	Please specify
24	Connector type	BNC
25	Cable type	Triaxial type
26	Photon & Electron energy response	Please specify
27	Long term stability	$\leq \pm 0.5\%$ per year
28	Beam quality factor (BJR-11)	Please specify
29	Carrying case	Please specify

<b>B</b>	<b>Plane parallel ion chamber (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Chamber type	Parallel plate
4	Latest calibration and validity	Please specify
5	Chamber collecting volume	Please specify
6	Measuring Quantities	Absorbed dose to water, air kerma & exposure
7	Chamber design	Waterproof, air vented, fully guarded
8	Chamber collecting volume	Please specify
9	Outer wall material	Please specify
10	Reference beam quality	Co-60
11	Anode material	Please specify
12	Nominal electron energy range	Please specify
13	Polarity effect	Please specify
14	Leakage current	<b>Typically in the range of <math>10^{-15}</math> A</b>
15	Stem leakage	Please specify
16	Cable leakage	Please specify
17	Signal stability	Please specify
18	Ion collection efficiency	Please specify
19	Chamber voltage range	Please specify
20	Temperature range	Please specify
21	Humidity range	Please specify
22	Air pressure	Please specify
23	Buildup cap dimension and material	Please specify
24	Connector type	BNC
25	Cable type	Triaxial type
26	Photon & Electron energy response	Please specify
27	Long term stability	<b><math>\leq \pm 0.5\%</math> per year</b>
28	Beam quality factor (BJR-11)	Please specify
29	Carrying case	Please specify
<b>C</b>	<b>Pin-point ion chamber/ Small volume ion chamber (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Chamber type	Pin-point
4	Latest calibration and validity	Please specify
5	Chamber collecting volume	Please specify
6	Measuring Quantities	Absorbed dose to water, air kerma & exposure
7	Chamber design	Waterproof, air vented, fully guarded
8	Outer wall material	Graphite
9	Reference beam quality	Co-60
10	Anode material	Please specify

11	Nominal photon energy range	<b>Preferably 50 kV to 20 MV</b>
12	Polarity effect	Please specify
13	Leakage current	<b>Typically in the range of <math>10^{-15}</math> A</b>
14	Directional response of chamber	Please specify
15	Stem leakage	Please specify
16	Cable leakage	Please specify
17	Signal stability	Please specify
18	Ion collection efficiency	Please specify
19	Chamber voltage range	Please specify
20	Temperature range	Please specify
21	Humidity range	Please specify
22	Air pressure	Please specify
23	Buildup cap dimension and material	Please specify
24	Spatial resolution	Please specify
25	Field size range	Please specify
26	Connector type	BNC
27	Cable type	Triaxial type
28	Photon & Electron energy response	Please specify
29	Long term stability	<b><math>\leq \pm 0.5\%</math> per year</b>
30	Beam quality factor (BJR-11)	Please specify
31	Carrying case	Please specify
<b>D</b>	<b>Unshielded Diode detector (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Detector type	P-type Si semiconductor
4	Detector volume	Please specify
5	Latest calibration and validity	Please specify
6	Measuring Quantities	Absorbed dose to water, air kerma & exposure
7	Detector design	Please specify
8	Reference beam quality	Please specify
9	Nominal photon & electron energy range	<b>Preferably <math>^{60}\text{Co}</math> to 25 MV photon and 6-25 MeV electron</b>
10	Nominal sensitivity of detector	<b>Preferably <math>&gt; 8</math> nC/Gy</b>
11	Leakage current	<b><math>\leq \pm 100</math> fA</b>
12	Directional response of diode	<b>Preferably <math>\leq \pm 1\%</math></b>
13	Cable leakage	Please specify
14	Signal stability	<b><math>\leq 1\%</math> /kGy</b>
15	Detector linearity	Please specify
16	Ion collection efficiency	Please specify
17	Usable voltage range	Please specify
18	Temperature range	Please specify
19	Humidity range	Please specify



20	Air pressure	Please specify
21	Spatial resolution	Please specify
22	Field size range	Please specify
23	Connector type	BNC
24	Cable type	Triaxial type
25	Cable length with diode detector	Please specify
26	Sampling time	350 msec.
27	Dead time	0
28	Calibration method	Please specify
29	PC interface	Please specify
<b>E</b>	<b>Imported Electrometer for diode detector (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Display type	Please specify
4	Latest calibration and validity	Please specify
5	Range of measurement	Please specify
6	Accuracy	Please specify
7	Zero drift	Please specify
8	Linearity	Please specify
9	Long term Stability	$\leq \pm 0.1\%$
10	Bias voltage & user setting	Please specify
11	Bias voltage accuracy	Please specify
12	Input connector type	BNC for Triaxial
13	Current & charge measuring ranges	Please specify
14	Timer specs	Please specify
15	Zeroing facility	Please specify (Auto/Manual)
16	Input power	Please specify
17	Warm up time	Please specify
18	Non linearity	$< \pm 1\%$
19	Repeatability	Please specify
20	Resolution	<b>Current: 2 fA, Charge: 15 fC</b>
21	Number of channels	Please specify
22	Auto range	Please specify
23	Temperature range	Please specify
24	Humidity range	Please specify
25	Zeroing time	<b>Should be around 1 min</b>
26	PC interface	Please specify
27	Memory	Please specify
28	Computer requirement	Please specify
29	Purpose to be serve	Should be able to work with unshielded diode detector for measurement of dose, kerma & exposure

<b>F</b>	<b>Winston-Lutz QA Kit (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Phantom material	Carbon fibre/perspex/acrylic
4	Ball material	Steel/Tungsten
5	Ball dimension	<b>Preferably of 5 mm dia.</b>
6	Wand dimension	Please specify
7	Micrometer adjustment for X, Y & Z axis	Please specify
8	Micrometer movement accuracy	<b>Preferably <math>\pm 0.01</math> mm</b>
9	Micrometer readout accuracy	<b>Preferably <math>\pm 0.01</math> mm</b>
10	Micrometer movement range	<b><math>\geq \pm 5</math>mm in all axes</b>
11	Locking mechanism to Linac couch	Please specify
12	Markers for easy alignment with lasers	Please specify
13	Gantry attached Film holder	Please specify
14	Collimator attachment tool	Please specify
15	Collimator attachment tool compatibility	Please specify
16	Compatibility with EPID of Linac	Please specify
17	Carrying case	Shall be provided
18	Application	<b>To provide submillimeter agreement between the true radiological isocenter and the room lasers in RT</b>
<b>G</b>	<b>Lucy 3D QA Phantom (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
3	Phantom material & density	<b>Preferably water equivalent</b>
4	Phantom dimension	Please specify
5	Measurable parameters & Quantities	<b>Absolute, relative and point-dose dosimetry measurements</b>
6	Dosimeters inserts	Please specify
7	Phantom movement accuracy	<b>Preferably <math>\pm 0.1</math>mm</b>
8	Phantom rotational accuracy	Please specify
9	MRI compatibility	Please specify
10	Locking mechanism to Linac couch	Please specify
11	Application	<b>Comprehensive QA solution for SRS/SRT</b>
<b>H</b>	<b>1D Motorized Water phantom (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Phantom material & density	<b>Water equivalent</b>
4	Size of phantom	At least 30cm $\times$ 30cm $\times$ 30cm
5	Phantom leveling option	Please specify

6	Marking on phantom for setup	Please specify
7	Scanning range	<b>At least 25 cm</b>
8	Scanning speed	Please specify
9	Probe holder for chamber	0.6cc, plane parallel, 0.125cc, pin-point, Diode & existing chambers in the department
10	Motorized movement	Stepper motor along Z-axis (vertical direction)
11	Application	Measurement of PDD & absolute dose
12	Positional accuracy	<b>Preferably <math>\pm 1\text{mm}</math></b>
13	Reproducibility	<b>Preferably <math>\pm 1\text{mm}</math></b>
14	Motion control	Software controlled and manual
15	System interface	Please specify
16	Power requirement	Please specify
17	Water filling system	Please specify
18	Software & hardware requirement	<b>To be provided</b>
<b>I</b>	<b>2D Water Phantom (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Phantom material & density	<b>Water equivalent</b>
4	Size of phantom	At least 30cm $\times$ 30cm $\times$ 30cm
5	Marking on phantom for setup	Please specify
6	Phantom leveling option	Please specify
7	Scanning range	<b>At least 25 cm</b>
8	Scanning speed	Please specify
9	Probe holder for chamber	0.6cc, plane parallel, 0.125cc, pin-point, Diode & existing chambers in the department
10	Stepping motor movement	Should be able to move in 2D (either X & Z axes or Y & Z axes)
11	Positional accuracy	<b>Preferably <math>\pm 1\text{mm}</math></b>
12	Reproducibility	<b>Preferably <math>\pm 1\text{mm}</math></b>
13	Motion control	Software controlled and manual
14	Application	Measurement of PDD, Profile and absolute dose
15	System interface	Please specify
16	Power requirement	Please specify
17	Water filling system	Please specify
18	Software & hardware requirement	<b>To be provided</b>
<b>J</b>	<b>Reference class imported- (Non PC based) Electrometer (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Application	Dose and Dose rate measurement in Radiotherapy
4	Measurable quantities	Charge, current, absorbed dose to water, air kerma rate, exposure, exposure rate
5	Charge and current measuring range	Please specify

6	Resolution of charge and current measurements	<b>Charge: 1 fA</b> <b>Current: 10 fC</b>
7	Stability	Please specify
8	Linearity	Please specify
9	Accuracy of Charge and Current measurement	Please specify
10	Time Interval of measurement	Min =            Max =
11	Process of nullification	Please specify
12	Leakage current	Please specify
13	Chamber/bias voltage	<b>Around <math>\pm 400</math> V with step wise increment</b>
14	Temperature range	Please specify
15	Air Pressure range	Please specify
16	Humidity	Please specify
17	Connector type	BNC
18	Power requirements	Please specify
19	Battery operation in case of power failure	Yes/No
20	Interface	Please specify
21	Display	Please specify
22	Zeroing facility	Please specify (Auto/ Manual)
23	Warm up time	Please specify
24	Non linearity	$< \pm 1\%$
25	Accuracy	Please specify
26	Repeatability	$\leq \pm 0.25 \%$
27	Resolution	Please specify
28	Long term stability	$\leq \pm 0.5\%$ per year
29	Number of channels	Please specify
30	Auto range	Please specify
31	Zeroing time	Please specify
32	PC interface	Please specify
33	Memory	Please specify
34	Computer requirement	Please specify
<b>K</b>	<b>Local made Water Phantom (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Size	At least 30cm $\times$ 30cm $\times$ 30cm
4	Wall Material, wall thickness and Density	Please specify
5	Depth of measurement	should be greater than 10 cm
6	Scale	Vertical scale on the Phantom wall
7	Chamber sleeve	Sleeve should be provided for 0.6 cc cylindrical chamber
8	Chamber sleeve Material & thickness	Please specify

9	Water drain out method	Please specify
10	Provision of handles for carry	Please specify
<b>L</b>	<b>TPR<sub>20/10</sub> Phantom (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Type	Air tight
4	Size	Please specify
5	Zig	for 0.6 cc cylindrical ion chamber
6	Water filling Method	Please specify
7	Marking on phantom for setup	Cross hair with field marking should be available on surfaces
8	Wall material and density	<b>Water equivalent</b>
<b>M</b>	<b>Water equivalent slab phantom (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Material and density	Please specify
4	No. of slabs	Please specify
5	Size of the slabs	Each slab size should be 30 cm × 30 cm
6	Thickness of slabs	Should comprises of 1mm, 2mm, 5mm and 10mm thickness
7	Total thickness of phantom	At least 30 cm
8	Adapter Plates for chambers	0.6 cc, plane parallel chamber, 0.125 cc and pin point chamber
9	Carrying Case	Please specify
10	Water Equivalence	Specify the energy range.
<b>N</b>	<b>Dosimetry Cables (Quantity-4)</b>	
1	Make	Please specify
2	Model	Please specify
3	Connector Type	BNC
4	Length	20 m
5	Diameter	Please specify
6	Leakage	Please specify
7	Type	Triaxial
8	Metallic guard to connectors	Please specify
<b>O</b>	<b>Connection Adaptor/converter (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	BNC(M) to TNC (F)	Quantity-1
4	BNC(F) to TNC (M)	Quantity-1
<b>P</b>	<b>Patient Specific QA system for IMRT, VMAT &amp; SRS/SRT (Quantity-1)</b>	

1	Make	Please Specify
2	Model	Please Specify
	<b>Detector array Specification</b>	
3	Detector type	Ion chamber or diode
4	Physical dimensions of detectors	Please Specify
5	Active volume of detectors	Please Specify
6	Spacing between detectors	<b>Preferably &lt; 7 mm</b>
7	Total numbers of detector and active area (cm <sup>2</sup> )	Please Specify
8	Detector arrangement	Please Specify
9	Detector sensitivity (nC/Gy)	<b>At least 1 nC/Gy</b>
10	Maximum dose per pulse (Gy)	Please Specify
11	Detector stability	Please Specify
12	Dose rate dependence	<b>&lt; ± 1.0%</b>
13	Spatial resolution	Please Specify
14	Measurable quantities	Absorbed dose and dose rate
15	Range of measurement (cGy/min)	<b>Preferably 0.1 – 24 Gy/min</b>
16	Directional response of detector	<b>Should be minimum</b>
17	Reference calibration of detectors	Please Specify
18	Operational temperature, pressure & humidity	Please Specify
19	Water equivalent inherent buildup (gm/cm <sup>2</sup> )	Please Specify
20	Detector physical depth (cm)	Please Specify
21	Measurable field size range (cm <sup>2</sup> )	Please Specify
22	Array geometry and dimension	Please Specify
23	Signal update frequency (ms)	Please Specify
24	Detector warm up time	Please Specify
25	Power & Signal cable	Please Specify
26	Reproducibility	Please Specify
27	Sampling time	Please Specify
28	Dead time	Please Specify
29	Calibration method	Please Specify
30	Calibration validity	Please Specify
31	PC Interface	Please Specify
	<b>Phantom Specification</b>	
32	Phantom material and density	<b>Preferably water equivalent</b>
33	Phantom dimension and geometry	Please Specify
34	Marking on phantom for setup	Please Specify
35	Method to correct rotational error	Please Specify
36	Method for transport and storage of phantom/Trolley	Please Specify
37	Inserts for absolute dosimetry	Please Specify
38	Phantom weight	Please specify

39	Positional Accessories	Please specify
	<b>Data analysis Specification</b>	
40	Compatibility with different modes of delivery	3DCRT, IMRT, VMAT & SRS/SRT
41	Gantry angle sensor & accuracy	Please specify
42	Patient plan evaluation parameters	2D & 3D Gamma analysis, DVH in patient anatomy, Isodose, profile and numerical value
43	Off-axis measurements	<b>Should be feasible</b>
44	Non-coplanar measurements	<b>Should be feasible</b>
45	Compose & merge measurements	Please specify
46	Machine QA analysis parameters	Please specify
47	Compatible for FFF photon beams	<b>Should be feasible</b>
48	Data transfer options	<b>Preferably via DICOM interface</b>
49	Software upgrades	<b>To be provided for free after installation up to 10 years</b>
<b>Q</b>	<b>Digital Barometer (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Accuracy & precision of measurement	Please specify
4	Calibration and validity	Please specify
<b>R</b>	<b>Analog thermometer (Quantity-2)</b>	
1	Make	Please specify
2	Model	Please specify
3	Accuracy & precision of measurement	Please specify
4	Calibration and validity	Please specify
<b>S</b>	<b>GafChromic Dosimetric Films (Type: EBT-XD)</b>	
1	Make	Please specify
2	Size & quantity	8" × 10", 50 nos.
3	Useful dose range	0.4 to 40 Gy
4	Application	SRS/SBRT QA
<b>T</b>	<b>GafChromic Dosimetric Films (Type: EBT-3)</b>	
1	Make	Please specify
2	Size & quantity	8" × 10", 50 nos.
3	Size & quantity	13" × 17", 20 nos.
4	Useful dose range	0.2 to 10 Gy
5	Application	Machine QA & patient specific QA
<b>U</b>	<b>Ready-pack Radiographic Film (Type: EDR2)</b>	
1	Make	Please specify
2	Useful dose range	Please specify
3	Size & quantity	10" × 12", 100 nos.

4	Size & quantity	35 × 43 cm <sup>2</sup> , 100 nos.
5	Application	Machine QA & patient specific QA
<b>V</b>	<b>Advance Electron Density Phantom (Quantity-1)</b>	
1	Make and model	Please specify
2	Dimension of phantom	Please specify
3	Phantom material and density	<b>Preferably water equivalent</b>
4	Number of inserts for different densities	Preferably more than 10
5	Details of various insert materials	Electron density relative to water and physical density
6	Purpose to be serve	Shall be able to provide accurate corrections for tissue inhomogeneities. The Phantom can be used to establish the relationship between the electron density of various tissues and their corresponding CT number.
7	Carrying case	Please specify
<b>W</b>	<b>Thermoluminescence Reader System (Quantity-1)</b>	
1	Make	Please specify
2	Model	Please specify
	<b>TLD Reader Unit</b>	
3	Heating profile	Various Heating profiles (Linear, Single & Multi-plateau)
4	Heating Range	Room temp. to 500°C
5	Range of measurement	Please specify
6	Accuracy	< 1%
7	Stability	Please specify
8	Repeatability	Please specify
9	Dark Current of PMT	less than 100 µGy
10	Power supply	240 ±10% V AC, 50Hz.
11	Operating Temperature range	Please specify
12	Humidity Range	10% to 90%
13	Warm up time	Please specify
14	Background Correction	Automatic/manual
15	Temperature Calibration	Please specify



<b>Phosphor</b>		
16	Type of phosphor with shape & size	Powder/ Pallet/ Disk/ Rod/ Chip
17	Phosphor material	Please specify
18	Quantity	Minimum 500 for at least two different shapes
19	Reusability	Please specify
20	Accuracy of dose measurement	< 1%
21	Minimum dose measurement limit	Please specify
22	Linearity Range	up to 50 Gy
<b>Computer System</b>		
23	Measurement Software	Please specify
24	Measurement Software license	Validity should be minimum 10 years/ upgradable upto minimum 10 years without any additional cost
25	CPU details	RAM: 8 GB, Graphic Card: latest Nvidia, Processor: latest generation i5 or above, HDD: 2 TB
26	LCD Monitor size	24"
27	OS	Windows OS (Latest version)
28	Printer	Laser printer with cartridge (HP/Canon)
29	UPS	Standalone UPS system for minimum 30 min backup.

**Note: Any software or hardware component required for basic functionality of the quoted features which may be overlooked in the specification should be supplied by the vendor without any additional cost.**