

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
VIKRAM SARABHAI SPACE CENTRE (VSSC)
THIRUVANANTHAPURAM**

Tender for Raising and Lowering Hearth Furnace

Bids to be submitted online

**Tender No.: VSSC/PURCHASE UNIT V (MME PURCHASE)/VS202100313401 dated
28-09-2021**

A. Tender Details

Tender No :	VSSC/PURCHASE UNIT V (MME PURCHASE)/VS202100313401
Tender Date :	28-09-2021
Tender Classification:	WORKS
Purchase Entity :	PURCHASE UNIT V (MME PURCHASE)
Centre :	VIKRAM SARABHAI SPACE CENTRE (VSSC)

Procurement of Raising and Lowering Hearth Furnace

This is a TWO-PART tender i.e. Techno-Commercial (Part I) and Price Bid (Part II). Hence all technical & Commercial details shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid.

Only online tenders will be accepted. No manual/ Postal/e-mail/Fax offers will be entertained. No manual tender document will be issued.

CONSEQUENT TO COVID 19 PANDEMIC AND AS PER DIRECTIONS FROM VSSC AND DOS, NO ADVANCE PAYMENT IS PAYABLE TO THIS TENDER.

1. Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid.
2. Foreign vendors are not permitted to quote.
3. The percentage of Local content should be specifically mentioned in the offer, without which it will be summarily rejected.
4. Preference will be given to Class I Local Supplier and in their absence, Class II Local Suppliers will be considered.
5. GST No. Our Goods & Service Tax (GST) Registration No. 32AAAGV0026J1ZL.
6. GSTIN, Rate & HSN Code: Vendors registered under GST shall mention their GSTIN, applicable rate and HSN code wherever necessary as per GST Law.
7. Preferred Delivery: NOT APPLICABLE.
8. Customs Duty: Not Applicable.
9. Free Issue Material (FIM): N/A
10. Guarantee & replacement: Our requirement of Guarantee is 12 months.
11. Performance Bank Guarantee (PBG): PBG @ 3% of order value to be submitted in the form of Bank Guarantee from a Scheduled Bank, valid till successful completion of all contractual obligations,

including the warranty period, in case PO/Contract is awarded.

12.Security Deposit: SD will be applicable if the Purchase Order value is above Rs.5 lakhs. SD @ 3% of order value to be submitted in the form of Bank Guarantee from a Scheduled Bank, valid till successful completion of PO / Contract, if awarded.

13.Consolidated SD cum PBG: If both SD and PBG are applicable, a Consolidated SD cum PBG for 3% order value can be submitted in the form of Bank Guarantee from a Scheduled Bank, valid till successful completion of all contractual obligations, including the warranty period.

14.Liquidated Damages Clause: The delivery period should be realistic. The delivery period so quoted and mentioned in the order is the essence of the PO/Contract. In case of delay in delivery of material as per the delivery schedule, LD @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value shall be levied. Wherever installation & commissioning is also involved, the supply will be deemed to have been completed only when the entire Stores is supplied, installed and accepted.

15.LD, Warranty, PBG, SD clauses are mandatory and offer without acceptance of these clauses will not be considered for evaluation.

16.Delivery terms : Our standard delivery term is FOR, VSSC Trivandrum. In case any vendors offer delivery term of Ex-Works, Packing & Forwarding charges, if any, should be indicated separately either as a percentage of the quoted rate or as a lumpsum amount.

17.Payment terms: Our standard payment term is 100% within 30 days on receipt and acceptance of item at our site.

18.All registered MSME vendors are requested to provide their Registration and Ownership details.

19.Vendors may please note that MSMEs are not exempted from the submission of Security Deposit.

20.Vendors shall provide the name, address, email ID and contact number of authorized official in order to contact in case of need.

21.PO will be placed on technically and commercially suitable lowest offer basis and VSSC reserves the right to split the order on L1 basis.

22.If any vendor submits forged / false documents along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.

23.Tenders are not transferrable and in case any vendor is not interested or able to submit their tenders, such vendors may send their regret letter.

24.VSSC has the right to cancel the tender without assigning any reason etc.

25.(a)We are partially exempted from payment of IGST and eligible for IGST @5% as per guiding Principles conveyed by the Ministry of Finance, Dept. of Revenue Notification No. 47/2017 Integrated Tax (Rate) dated 14.11.2017.

(b) We are partially exempted from payment of IGST and eligible for paying IGST @5% vide Ministry of Finance Dept. of Revenue Notification No.1/2017 Integrated Tax (Rate), Schedule I; SI.No.243B Dated 28/06/2017 as amended by Notification No. 25/2018 Integrated Tax (Rate) Dated 31/12/2018

(c) We are partially exempted from payment of GST and eligible for paying GST @5% vide Ministry of Finance Dept. of Revenue Notification No. 45/2017 Central Tax (Rate) Dated 14/11/2017 and Government of Kerala Taxes(B) Department Notification No.GO(P) No.169/2017/TAXES Dated 15/11/2017. IGST / GST CONCESSIONAL CERTIFICATE SHALL BE PROVIDED ALONGWITH

PURCHASE ORDER. We are partially exempted for payment of IGST and eligible for paying IGST @5% vide Ministry of Finance, Dept. of Revenue Notification No.47/2017 - Integrated Tax (Rate) dtd14/11/2017.

26. Wherein PFMS Number is not available, please provide IFSC Code, Bank Details etc, and upload Copy of Personalized cheque leaf in the name of the Purchase Vendor or NEFT Mandate form duly endorsed by the Bank of the Vendor

27. Copy of latest filed tax returns

28. Details of registration Number, PAN Card, GST, TIN, NSIC, MSME registration etc.

29. The address of registered site works / workshop / etc.

30. Last minute clarification on tenders will not be entertained.

31. If you are unable to quote, please send a regret letter/mail.

CONDITIONS FOR BIDDER FROM A COUNTRY WHICH SHARES LAND BORDERS WITH INDIA

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority. Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

2. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order

3. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

A.1 Tender Schedule

Bid Submission Start Date : **30-09-2021 17:00**

Bid Clarification Due Date : **20-10-2021 16:00**

Bid Submission Due Date : **02-11-2021 14:00**

Bid Opening Date : **02-11-2021 14:15**

Price Bid Opening Date : **07-12-2021 14:00**

B. Tender Attachments

NA

Instructions To Vendors

1. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority.

Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

2.

Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

3. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

2. PPP Make in India(Non- Divisible Items-Class I & II Local Suppliers Only)

1. A committee (with an external expert from a practicing cost accountant or practicing chartered accountant, if required) constituted for independent verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.

2. In cases the quoted price is in excess of Rs.1000 Lakhs (including duties, taxes and freight & Insurance) the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in case of suppliers other than companies) giving the percentage of local content.

3. The Public Procurement (Preference to Make in India), Order 2017 issued by Govt. of India indicates that if there are any general or specific restrictive clauses to restrict participation of Indian companies in those countries procurement tenders, reciprocity clause need to be invoked as per the order. Hence, if ISRO or Govt. of India come across that Indian suppliers of an item are not allowed to participate and / or compete in procurement by your government, the bid submitted by you will be not be considered and excluded from eligibility for procurement. Please note this point.

4. False declarations will be in breach of code of the integrity for which a bidder or its successor's will not be eligible/debarred for purchase preference from further tenders / pending tenders for two years along with other actions as may be applicable.
5. In case of a complaint received from any local supplier indicating a need for review / verification of Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant (w.r.t the false declaration given by the successful vendor on the local content), a complaint fee of Rs.2Lakhs or 1% of the locally manufactured items being procured (subject to a maximum Rs. 5Lakhs), whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
6. The ink-signed certificate shall be provided on vendors letter head along with the offer (in case of online tender, copy of ink-signed certificate shall be uploaded along with your offer under concerned tab. Original in Hard copy shall be produced on request). In case of non-submission of certificate, the purchase preference shall not apply.
7. The 'Class-I & II local supplier' should provide a "Self Certification" along with technical offer indicating that the item offered meets the minimum local content [as per Sl. No.(3)] as called for in the tender and provide the percentage of local content along with details of the location(s) at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to MLC(minimum Local Content) in technical bid zone.
8. Purchase Preference Policy:- Goods/Works which are not divisible (ie., required quantity is 1 or as a package) and Services:
 - a) If L1 is from a 'Class-I local supplier', the contract will be awarded to L1 bidder.
 - b) If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price (inclusive of duties, taxes and freight & insurance).
 - c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and order/contract shall be awarded accordingly. In case where none of the 'Class-I local supplier' within the margin of purchase preference agree to match the L1 price, then the order/contract shall be awarded to the original L1 Bidder.
9. Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.
10. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including

duties, taxes and freight & Insurance).

11. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).

12. The margin of Purchase Preference shall be up to 20%.

13. 'Local content' means the amount of value added in India (i.e. indigenous items/services added in the offered products/ services/ works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent.

14. Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: i. Equal to or more than 50%: Class-I local supplier. ii. More than 20% but less than 50%: Class-II local supplier. iii. Less than or equal to 20%: Non-local supplier.

15. a) The subject item falls under Non-divisible category. b) The offers sought only from Class-I & Class-II local suppliers

16. In line with Public Procurement (Preference to Make in India), Order 2017 & its amendments issued by Govt. of India from time to time with a view to support the Indian industries, ISRO has implemented "Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class-I Local Supplier" for the goods/ services/ works covered in this tender, subject to the following terms & conditions:-

3. PROFORMA FOR INSTRUCTIONS TO TENDERERS AND TERMS & CONDITIONS OF TENDER where the indent value is Rs. 2.00 lakhs & above for indigenous stores items

1. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.

2. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

3. The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

4. SECURITY DEPOSIT: Wherever, the Purchase Order value is Rs. 5.00 Lakhs or more, on acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause regarding Delivery. (b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

5. Sales Tax and/or other duties/levies legally leviable and intended to be claimed should be mentioned in the price bid template. If nothing is mentioned, then it will be presumed that the rate quoted is inclusive of all taxes/duties.

6. TERMS & CONDITIONS OF TENDER

7. TEST CERTIFICATE: Wherever required, test certificates should be sent along with the despatch documents.

8. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

9. The authority of the person signing the tender, if called for, should be produced.

10. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

11. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.
(d)

Specifications: Stores offered should strictly conform to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes

to specifications with appropriate response for the same.

12. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

13. The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of Stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

14. The term Purchaser shall mean the President of India or his successors or assigns.

15. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

16. ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as

aforesaid.

17. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

18. DESPATCH: The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

19. GUARANTEE & REPLACEMENT:

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the Purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or any other period or as to whether the nature of defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee conditions outlined in (a) to (e) above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee (as prescribed by the Purchaser)

20. PACKING FORWARDING & INSURANCE: The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

21. PRICES: Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

22. a) Your offer should be valid for 90 days from the date of opening of the tender.

b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

23. d) The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

4. Model Certificates for Bidder from a country which shares land border with India

1 Model Certificate for Tenders For Transitional Cases

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered.

2 Model Certificate for Tenders

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

3 Model Certificates for Tenders for Work involving possibility of subcontracting

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contracting from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contract from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

C. Bid Templates

C.1 Technical Bid - Raising and Lowering Hearth Furnace

1. Furnace: Raising and Lowering hearth Furnace as per the specification

Item specifications for Furnace

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Raising and Lowering Hearth Furnace as per the specification given herewith	As per the Annexure-I	Yes / No / Explain		

[Document : Spec., Terms and Conditions](#)

[Document : Compliance Sheet](#)

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Scope	Design, fabrication, supply, installation & commissioning of 1800 grade raising and lowering hearth furnace for glass melting, thermal shock studies, sintering ceramics, heat treatment of materials at modified environment (N ₂ /Ar) with a cascade control system for job temperature monitoring and control.	Yes / No / Explain		
2	Chamber size (Height x Diameter)	200 x 160 mm or closer dimensions	Yes / No / Explain		
3	Maximum Operating Temperature in air	1800 °C	Yes / No / Explain		

4	Continuous (atleast 18 hours) operating Temperature	1700 °C	Yes / No / Explain		
5	Time required for reaching maximum temperature	120 minutes maximum	Yes / No / Explain		
6	Maximum Power	5 kW approx. (Power requirement should not be more than 5.5 kW)	Yes / No / Explain		
7	Maximum external size (Height x Width x Depth)	1000 x 800 x 600 or lesser (Should be a table top/Bench top model)	Yes / No / Explain		
8	Weight	180 kg or lesser (Equipment with minimum weight and specified chamber volume shall only be considered)	Yes / No / Explain		
9	Temperature uniformity between 800 and 1800°C	± 3°C (without external air/inert gas purging)	Yes / No / Explain		

10	Heating element	<p>Molybdenum disilicide (MoSi₂) heating elements of 1900 grade. It is recommended to use heating element with hot zone diameter 6mm.</p> <p>Offer should mention the make and model number of the heating element. Failing to the same, offer shall not be considered further. Heating elements should be held in position using suitable clamps & plugs. Offer should mention the material employed for the same.</p> <p>Elements should be connected with double thickness, high amperage aluminium element connection braids. These aluminium braids have to be firmly fixed to heating element through a spring clip tool. Offer should mention the material employed for the same.</p>	Yes / No / Explain		
11	Heating element protection	<p>Supply should include thin walled, high temperature resistant ceramic heating element protection system to avoid glass vapor corrosion.</p> <p>Offer should specify the technical details (material, make, product number if any, dimension, etc.) of the ceramic element protection. Failure to mention the same shall disqualify the offer.</p>	Yes / No / Explain		

12	Atmosphere	Air/inert Maximum working temperature at inert atmosphere with Nitrogen and Argon environment has to be mentioned in the offer. Supply should include 2 number of inverted crucibles (recrystallized alumina Al ₂ O ₃ of >99.7% purity)) for containing the controlled environment.	Yes / No / Explain		
13	Gas purging System	Supply has to include a Solenoid valve with automatic switch. It should be controllable through the primary controller. 100mm flowmeter for chamber furnaces or ovens with gas inlets or retorts for argon flow of Argon (2-22 litre/min) Make and model number of the solenoid valve and flow meter should be mentioned in the offer.	Yes / No / Explain		

14	Insulation	<p>Chamber should be lined with high quality ceramic fiber vacuum-formed board insulation to obtain high thermal efficiency. Design should consider low thermal mass and fast heating requirements (120 minutes to reach maximum temperature). Raising and lowering hearth should be insulated with high quality refractory material. Hearth has to be designed with step design / protrusion inside to minimize heat loss. Party should mention the source of insulation boards in their quotation. Insulation should withstand thermal shocks encountered during glass melting/ thermal cycling experiments/ thermal shocking studies. Furnace design should ensure cylindrical hot zone through hexagonal and octagonal insulation assembly. Offer should specify the technical details (material, make, product number if any, dimension, etc.) of the insulation material. Failure to mention the same shall disqualify the offer.</p>	Yes / No / Explain		
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15	Hearth	<p>Hearth movement has to be fast enough for quenching experiment. The time taken for full Closed to fully open should be less than or equal to 4 seconds.</p> <p>Hearth should be capable of withstanding high-temperature repeated thermal shocks due to raising and lowering of the furnace.</p> <p>Supply should include a spare hearth insulation system. As the indented purpose of the furnace is for high temperature glass melting and thermal shock studies. (It should be listed under the essential spare and Price for the same should be indicated separately under the list)</p> <p>Position of the hearth should be firmly stoppable between fully open and fully closed condition.</p> <p>Hearth should have necessary safety interlocks. Hearth opening should stop the heating system.</p> <p>Centre of the hearth should have a gas purging port. The port should be made of well sintered ceramic tube.</p> <p>Such a gas purging system and an inverted crucible positioned in the hearth should ensure controlled environment.</p> <p>The Supply should include a ceramic insert for blocking the port while operating the furnace without gas purging.</p> <p>Offer should specify the technical details (material, make, product number if any,</p>	Yes / No / Explain		
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		dimension, etc.) of the ceramic tube insert employed for gas purging, inverted crucible and ceramic insert that blocks the gas purging port of the insulation material. Failure to mention the same shall disqualify the offer.			
16	Radiation Shutter	Supply should include a radiation shutter to heat exposure to the working personnel. It should be a hinged design.	Yes / No / Explain		
17	Thermocouple	Three numbers of thermocouple (Land-Jewell type, Pt20%Rh/Pt40%Rh thermocouple). Thermocouple (T/C) has to supplied along with recrystallized alumina sheath. Terminal connection of the T/C should employ ceramic insulator-based connector. Thermocouple has to be calibrated (3 points atleast at high temperatures) with traceable standard. Primary T/C and overtemperature protection T/C has to be in duplex configuring. Third thermocouple is for Job temperature monitoring and control (cascade control) Offer should specify the make of the thermocouple. Failure to mention the same shall disqualify the offer.	Yes / No / Explain		

18	Controllers	<p>A primary controller and recorder should become part of the supply. Temperature data has to be logged and retrievable. Provision for data archiving onto USB or via Ethernet should be possible. It should have provision for following Provisions/controls:</p> <ul style="list-style-type: none"> • Independent over temperature protection • Safety alarm • Switching solenoid valve for gas flow • stirrer drive <p>A dedicated cascade control system for the Job temperature monitoring and controlling should be a part of the supply. Offer should specify the make of the make, model number, technical specification and features of the all the controllers employed in the furnace. Failure to mention the same shall disqualify the offer.</p>	Yes / No / Explain		
19	Power Control	Phase angle type harmonic free thyristor drive power controller. Party should mention specifications and details of the same.	Yes / No / Explain		
20	Transformer	Double wound element circuit transformer. Party should mention specifications and details of the same.	Yes / No / Explain		
21	Power	Single phase, 230 V or Three phase, 415V (50Hz)	Yes / No / Explain		
22	Control panel	Entire control panel having necessary indicators, primary & secondary controllers and cooling fan should be housed in a single cabinet.	Yes / No / Explain		

23	Construction	Furnace design should be table top model. Meanwhile, design should facilitate the easy maintenance access. Since working ambience is a coastal area having higher humidity, equipment construction should consider corrosion resistant materials for fasteners, frame and outer shell.	Yes / No / Explain		
24	Outer shell	Outer casing should be a double walled construction with forced air flow. The outer shell must be made of steel resistance against corrosion. The skin temperature of furnace should not exceed 50°C. When gas purging is not required, there should be provision in hearth for closing (plugging) the gas purging hole. Thus it should ensure outer skin temperature of the hearth at 60°C max. Designer should consider cooling requirements for 100 hours continuous operation.	Yes / No / Explain		
25	Switches & Safety interlocks	<ul style="list-style-type: none"> • Separate switch to be provided for Hearth 'Up' and 'Down' • Emergency stop button should be provided for emergency. • All necessary safety interlocks should be provided. • Hearth opening should stop the heating system. 	Yes / No / Explain		

26	AMC	AMC terms and condition and cost involved for AMC for 5 years beyond the warranty period has to be mentioned in the price bids. However, it shall not be treated as contractual obligation/agreement with the party. As it is optional item, cost of the AMC need not included while mentioning the facility cost in e-procurement portal.	Yes / No / Explain		
27	Technical Experience of the party	Party should have previous experience in design, fabrication and supply of similar system with equivalent specifications. Proofs (photograph of the furnace & purchase reference of the same along with specification) for the same has to be produced along with the offer. Failing to the same shall disqualify the offer submitted.	Yes / No / Explain		
28	Two part bidding system	Party should submit two-part bid through e-procurement portal. Part-I is a Techno-Commercial offer. Part-II is Price Bid showing cost/price break up. Failing to the same shall disqualify the offer submitted.	Yes / No / Explain		

29	Part-I of the bid (Technical bid)	Part-I of the bid document should contain compliance matrix document comparing VSSC Specification and offered specification. Part-I should also mention the delivery, warranty, AMC, payment and other commercial terms. Parties should include relevant information of materials to be used, brand or make of items etc. in the quotes. Offers submitted with one-word compliance "YES" and specifications are reproduced from VSSC's tender document can not be considered. Such offers without necessary technical details and offers that are incomplete in any sense shall be rejected without further consideration.	Yes / No / Explain		
30	Part-II of the bid (Price bid)	Price Bid (Part-II) should provide the price break up of the individual systems. Party has to submit the list of essential spares/consumable for 3 years of trouble-free operation and their respective price in the price bid (Part-II). Failing to the same shall disqualify the offer submitted.	Yes / No / Explain		
31	Brand and make of the facility eelemnets	Parties should include relevant information of materials to be used, brand or make of items, technical details showing competitive nature of bought out items, fabricated items etc. to meet the specification in the quotes	Yes / No / Explain		

32	Photographs & Sketch	Party should give rough sketch/photograph of the furnace along with quote. All dimensions shall be indicated in the quotation. Failing to the same shall disqualify the offer submitted.	Yes / No / Explain		
33	Essential Spares for 3 year trouble free operation	Party has to submit the list of essential spares/consumable (including the spare hearth, heating elements, T/Cs etc.) for 3 years of trouble-free operation and their respective price in the price bid (Part-II). Failing to the same shall disqualify the offer submitted.	Yes / No / Explain		
34	Delivery	Delivery should be within 16 weeks from the order placement. Delivery period more than 16 week from PO shall not be accepted.	Yes / No / Explain		
35	Installation & Commissioning	After installation, performance trial has to be carried out. Party should demonstrate name plate capacity of the equipment. The supplier shall undertake entire responsibility for dispatch, installation of the equipment at our site, commission and demonstrate the performance of the equipment.	Yes / No / Explain		
36	Documents	Technical catalogue/leaflets, electrical schematic of all relevant instruments/control panels shall be supplied along with furnace. Party shall give two sets of all electrical wiring diagram. Test certificate/calibration and user manual in English for temperature controller should be supplied along with the item.	Yes / No / Explain		

37	LD CLAUSE	In the event of failing to comply with the delivery schedule stipulated in the Purchase Order, the Liquidated Damages would be payable by you to VSSC @0.5% of the order value per week or part thereof in respect of the delayed portion subject to a maximum of 10% of the order value.	Yes / No / Explain		
38	PERFORMANCE BANK GUARANTEE	You have to submit a Performance Bank Guarantee (as per our format) for 10% of the order value, obtained from a Bank of International repute, immediately on completion of supply and should be valid for a period of 60 days beyond the date of completion of all terms and conditions of PO / expiry date of warranty period.	Yes / No / Explain		
39	SECURITY DEPOSIT	Party shall submit Security Deposit (as per our format) for 10% of Order value in the form of Bank Guarantee, obtained from a Bank of International repute, towards performance of the Purchase Order immediately on receipt of PO and should be valid for a period of 60 days beyond the date for completion of all the Terms and Conditions of PO.	Yes / No / Explain		

Supporting Documents required from Vendor

1. Price bid copy after masking the price

2. Technical Specification & Commercial terms without Price

3. Price bid

4. Technical brochure, if any

5. Compliance Sheet

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Assembled condition (except perishable items like Heating elements and external auxiliary items) that is ready for installation and commissioning	Yes / No / Explain	
2	Performance Bank Guarantee (PBG) Bank Guarantee @ 3% of Order Value valid till the completion of warranty period plus 2 months claim period to be submitted. Mandatory compliance required. Only Government Bodies/PSUs/PSEs can submit Indemnity Bond in lieu of BG. In the event of non-performance of warranty obligations, PBG will be forfeited).	Yes / No / Explain	
3	Payment Term: (Our Defalut payment term: For indigenous orders: 100% within 30 days after receipt and acceptance of item at our site. For import cases: 100% by Sight Draft with Bank Charges to respective accounts. NOTE: CONSEQUENT TO COVID 19 PANDEMIC AND AS PER EXTANT GUIDELINES FROM DEPARTMENT OF SPACE, NO ADVANCE PAYMENT IS PAYABLE TO THIS TENDER).	Yes / No / Explain	
4	Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: a)Equal to or more than 50% : Class-I local supplier. b)More than 20% but less than 50% : Class-II local supplier. c)Less than or equal to 20% : Non-local supplier. Mention your category.	Yes / No / Explain	
5	Local content means the amount of value added in India (i.e. indigenous items/services added in the offered products/services/works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent. Indicate extent of Minimum Local Content in offered product/service and location of such value additions.	Yes / No / Explain	

6	The Class-I & II local supplier should provide a Self Certification along with your offer in PDF format indicating that the item offered meets the minimum local content as called for in the tender as mentioned above and provide the % of local content along with details of the location(s) at which the local value addition is made. In case of two part tenders, it is mandatory to indicate compliance to MLC(minimum local content) in technical bid itself. Confirm attachment of Self declaration along with the offer.	Yes / No / Explain	
7	PO Ordering Address with Name and Contact Details of Sales Person concerned (e-mail and phone number).	Yes / No / Explain	
8	Any Other Terms	Yes / No / Explain	
9	Taxes and other costs, if any . [Note: VSSC is a Public Funded Research Institution under the administrative control of Department of Space and is eligible for partial exemption of IGST @5% vide Notfn No. 45/2017, 47/2017 dt 14.11.2017 respectively. Necessary IGST EXEMPTION CERTIFICATE shall be issued.]	Yes / No / Explain	
10	Security Deposit (Applicable if Offer Value is Rs. 5 Lakhs or above. MSME/NSIC Units are NOT EXEMPTED from the payment of SD. Bank Guarantee @ 3% of Order Value valid till 60 days from the date of supply to be submitted. Mandatory compliance required. Only Government Bodies/PSUs/PSEs can submit Indentity Bond in lieu of BG. In the event of non-performance of contractual obligations, SD will be forfeited).	Yes / No / Explain	
11	Delivery Terms.	Yes / No / Explain	
12	Delivery Period	Yes / No / Explain	
13	Liquidated Damages (Applicable beyond the delivery period mentioned in this tender @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value. Mandatory compliance required).	Yes / No / Explain	

14	Warranty	Yes / No / Explain	
15	Validity	Yes / No / Explain	
16	Bank details:Bank Name, IFSC Code, Account No. etc	Yes / No / Explain	
17	Copy of latest filed tax returns	Yes / No / Explain	
18	Details of registration, PAN card, NSIC, MSME, GST, TIN etc	Yes / No / Explain	
19	Mode of dispatch	Yes / No / Explain	
20	Installation and Commissioning	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	Furnace: Raising and Lowering hearth Furnace as per the specification	1.00 Nos.		-		

Common charges (Applicable for all items)

Freight charge	
P&F Charges	