

भारत सरकार GOVERNMENT OF INDIA
अंतरिक्ष विभाग DEPARTMENT OF SPACE

क्रय यूनिट-III PURCHASE UNIT-III

विक्रम साराभाई अंतरिक्ष केंद्र VIKRAM SARABHAI SPACE CENTRE

तिरुवनंतपुरम THIRUVANANTHAPURAM - 695 022

विज्ञा. सं. वीएसएससी एसपीआरई-क्रय/19-2 दि. 25/08/2021

ADVT. NO. VSSC/SPRE-PUR/19-2 DT. 25/08/2021

भारत के राष्ट्रपति के लिए तथा उनकी ओर से वरिष्ठ प्रधान, क्रय एवं भंडार, विक्रम साराभाई अंतरिक्ष केंद्र (वीएसएससी), तिरुवनंतपुरम, निम्नलिखित के लिए ई-प्रापण के माध्यम से (क्रम सं. 1 के लिए) निविदाएं आमंत्रित करता है: -

For & on behalf of the President of India, the Sr. Head Purchase & Stores, Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram invites Tenders through e-procurement (for Sl. No. 1 thru 3) for the following :-

| क्रम सं. Sl. No | निविदा सं. Tender No. | वर्णन / Description | मात्रा Qty. | निविदा शुल्क Tender Fee |
|--------------------|--|---|----------------|----------------------------------|
| 1 | VSSC/PURCHASE UNIT III (SPRE)/VS2021003284 [लोक निविदा - दो भाग PUBLIC TENDER- TWO PART] | कार्बनिक, अकार्बनिक पदार्थों में स्थूल स्तर पर उपस्थित सल्फर के कार्बन सल्फर विश्लेषक मापन की आपूर्ति, संस्थापना, कमीशनिंग, प्रदर्शन तथा परीक्षण Supply, Installation, Commissioning, Demonstration & Testing of Carbon Sulphur Analyzer measurement of Sulphur in macro level present in Organic, Inorganic Materials | 1 सं. No. | लागू नहीं / NA |
| 2 | VSSC/PURCHASE UNIT III (SPRE)/PCM/2021002894 [लोक निविदा - दो भाग PUBLIC TENDER- TWO PART] | 10kN क्षमता के सार्वत्रिक परीक्षण मशीन की आपूर्ति, संस्थापना व कमीशनिंग Supply Installation & Commissioning of Universal Testing Machine Of 10kN Capacity | 1 सं. No. | लागू नहीं / NA |
| 3 | VSSC/PURCHASE UNIT III (SPRE)/PCM/2021000952 [लोक निविदा - दो भाग PUBLIC TENDER- TWO PART] | नोजल मुक्त पराश्रव्य लेपन मशीन Supply of Nozzle free Ultrasonic Coating Machine | 1 सेट. Set. | लागू नहीं / NA |
| 4 | VSSC/PURCHASE UNIT III (SPRE)/ASOE/2021003159 [लोक निविदा - दो भाग PUBLIC TENDER- TWO PART] | बहु मांगकर्ताओं के साथ बहु यूनिट स्वचालित रबड़ हार्नेस कू आपूर्ति, संस्थापना, कमीशनिंग, प्रदर्शन व परीक्षण। Supply, Installation, Commissioning, Demonstration & Testing of Multi Unit Automatic Rubber Hardness Tester with multi indentors | 1 सेट. Set. | लागू नहीं / NA |

विशेष टिप्पणी /Special Note:-

विदेशी विक्रेताओं को निविदा प्रस्तुत करने की अनुमति नहीं है। मेक इन इंडिया नीति के अनुसार केवल श्रेणी-I और श्रेणी-II के स्थानीय आपूर्तिकार इस बोली में भाग लेने हेतु पात्र हैं। विदेशी ओईएम से सीधे प्राप्त उद्धरणों या विदेशी ओईएमओं की ओर से उद्धरण प्रस्तुत कर रहे एजेंटों को इस निविदा में भाग लेने की अनुमति नहीं है।

Foreign vendors are not permitted to quote. Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid. Quotations directly from foreign OEM/ or from agents quoting on behalf of foreign OEMs are not allowed to participate in this tender.

| क्रम सं. Sl. No. | बोली प्रस्तुत करने की समय-सीमा Time limit for submission of Bid | बोली खोलने की तिथि Bid Opening date |
|---------------------|--|--|
| 01. | दिनांक 05.08.2021 [12:00 बजे तक] Upto 16.09.2021 [14:00 Hrs.] | दिनांक 16.09.2021 [14:01 बजे] |
| 02. | दिनांक 24.08.2021 [15:00 बजे तक] Upto 30.09.2021 [14:00 Hrs.] | दिनांक 30.09.2021 [14:01 बजे] |
| 03. | दिनांक 13.08.2021 [13:00 बजे तक] Upto 14.09.2021 [14:00 Hrs.] | दिनांक 14.09.2021 [14:01 बजे] |
| 04. | दिनांक 24.08.2021 [11:00 बजे तक] Upto 01.10.2021 [14:00 Hrs.] | दिनांक 01.10.2021 [14:01 बजे] |

क्रम सं. 01 से 03 के लिए, ब्यौरे इसरो ई-प्रापण पोर्टल <https://eproc.vssc.gov.in> पर उपलब्ध हैं।
For Sl. No. 01 to 03., details are available on ISRO e-procurement portal <https://eproc.vssc.gov.in>.

शुद्धिपत्र, यदि कोई हो तो, हमारे वेबसाइट www.vssc.gov.in / www.isro.gov.in में मात्र प्रकाशित किया जाएगा।

Corrigendum, if any will be published in our websites : www.vssc.gov.in / www.isro.gov.in only.

हस्ताक्षरित /Sd/-

वरि. प्रधान, क्रय एवं भंडार / Sr. Head, Purchase & Stores

E-Tenders are invited for the above mentioned procurements through our E-procurement site <https://eproc.vssc.gov.in>. Bids can be submitted before the due dates mentioned.

Only online tenders will be accepted. No manual / Postal / e-mail / fax offers will be entertained. No manual tender document will be issued. Parties interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eproc.vssc.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can seek help from help desk 0471-2565454 also as provided in the home page of e-procurement portal in case of any problem for registration and subsequent process. Vendors may please note that without registering in our e-procurement portal, they will not be able to quote for this e-tender.

Important Notice: Tender will be automatically closed on the due date if at least one offer is received. If the tender could not be opened on the first day due to any technical snag, it will be opened on the subsequent day as per the schedule.

This being a Two Part Tender, Cost shall be mentioned in the Price Bid Only. All the documents being uploaded like quote split up details, AMC cost etc should not contain the rates/costs. However, a copy of your PRICE BID, AMC quote etc WITHOUT PRICE SHALL BE UPLOADED in the Documents Solicited from the Vendor Field [available in Bid forms] TO KNOW THE PATTERN OF QUOTE. [ENSURE NOT TO MENTION ANY PRICE, OTHERWISE THE QUOTE WILL BE INVALID].

THE TECHNICAL DOCUMENTS NEED TO BE ATTACHED ONLINE AS A SINGLE PDF FILE WITHOUT ANY PRICE INFORMATION, TECHNICAL BID CONTAINING PRICE DETAILS WILL BE TREATED AS REJECTED.

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

Tender for High precision automated Carbon Sulphur Analyser for measurement of Sulphur in macro level(0-100%) present in Organic,Inorganic materials such as Rubbers,Elastomers,Polymers,Sulphur powder etc based on high temperature combustion method.

Bids to be submitted online

Tender No.: VSSC/PURCHASE UNIT III (SPRE)/VS202100328401 dated 05-08-2021

A. Tender Details

| | |
|------------------------|---|
| Tender No : | VSSC/PURCHASE UNIT III (SPRE)/VS202100328401 |
| Tender Date : | 05-08-2021 |
| Tender Classification: | GOODS |
| Purchase Entity : | PURCHASE UNIT III (SPRE) |
| Centre : | VIKRAM SARABHAI SPACE CENTRE (VSSC) |

Procurement of High precision automated Carbon Sulphur Analyser

This Tender is for the procurement of High precision automated Carbon Sulphur Analyser

This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.

Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.

Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.

This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.

Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.

The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.

In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General

Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

A.1 Tender Schedule

| | |
|------------------------------|-------------------------|
| Bid Submission Start Date : | 05-08-2021 12:00 |
| Bid Clarification Due Date : | 26-08-2021 12:00 |
| Bid Submission Due Date : | 16-09-2021 14:00 |
| Bid Opening Date : | 16-09-2021 14:01 |
| Price Bid Opening Date : | 30-09-2021 14:00 |

B. Tender Attachments

NA

Instructions To Vendors

1. Instructions to Vendors

1. This is an E Tender. Hence Postal/Fax/Email tenders will not be accepted.
2. Last minute clarification on tenders will not be entertained.
2. This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.
3. Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.
4. Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.
5. The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.
6. False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
7. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

C. Bid Templates

C.1 Technical Bid - High precision automated Carbon Sulphur Analyser for measurement of Sulphur in macro level(0-100%) present in Organic,Inorganic materials such as Rubbers,Elastomers,Polymers,Sulphur powder etc based on high temperature combustion method.

1. Carbon Sulphur analyser

Item specifications for Carbon Sulphur analyser

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|--|---|--------------------|-----------------------|--------|
| 1 | Sulphur Analyser | High precision automated Carbon Sulphur Analyser for measurement of Sulphur in macro level (0 -100%) present in Organic, Inorganic materials such as Rubbers, Elastomers, Polymers, Sulphur powder etc based on high temperature combustion method. | Yes / No / Explain | | |
| 2 | Sample size for the analysis of 100% pure sulphur powder | 10mg | Yes / No / Explain | | |
| 3 | Detection range (S) | 0 to 100% of sulphur | Yes / No / Explain | | |
| 4 | Detection range (C) | 0 to 100% carbon | Yes / No / Explain | | |
| 5 | Standard deviation | 1% | Yes / No / Explain | | |
| 6 | Detection time | <10min | Yes / No / Explain | | |
| 7 | Flow control & pressure monitoring | Active electronic mass flow controller and digital flow sensors. Pressure & flow sensors are to be digital. Flow meters must be controlled by PC | Yes / No / Explain | | |
| 8 | Base line | Automatic baseline compensation/zero adjustments | Yes / No / Explain | | |

| | | | | | |
|----|-----------------|---|--------------------|--|--|
| 9 | Safety | Automatic leak rate control | Yes / No / Explain | | |
| 10 | Furnace | (i)Heating capacity should be 1200 & suitable for the combustion of organic & inorganic samples. (ii)Resistance or HF Induction mode. (iii)Should have possibility handle high inorganic/halogen content (iii) Easy cleaning mechanism for the ash removal | Yes / No / Explain | | |
| 11 | Carrier gas | Oxygen gas 99.995% pure | Yes / No / Explain | | |
| 12 | Combustion gas | Oxygen gas 99.995% pure | Yes / No / Explain | | |
| 13 | Detector | IR or NDIR suitable for detection range upto 100% of sulphur & carbon Detector should not get affected/damaged even if carrier gas flow is not there | Yes / No / Explain | | |
| 14 | Software | Latest version of system software with original license. Software should be capable for equipment control through PC, data analysis & interpretation. Graphical display of signals & parameters, report generation and troubleshooting should be provided | Yes / No / Explain | | |
| 15 | Calibration kit | <ul style="list-style-type: none"> •Multipoint calibration •Calibrating materials with certificate of calibration with traceability for sulphur & carbon | Yes / No / Explain | | |
| 16 | Optional | Accessories for liquid sample handling | Yes / No / Explain | | |

2. Accessories

Item specifications for Accessories

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|-------------------------|--|--------------------|-----------------------|--------|
| 1 | Combustion gas cylinder | Oxygen cylinder with two stage regulator with relevant safety & purity certificate Purity: 99.995% Cylinder Capacity: 7m ³ Cylinder Type: 47 CS Cylinder Valve type: RH outer thread | Yes / No / Explain | | |
| 2 | Balance with enclosure | Highly accurate Semimicro balance (Max. 121g with readability 0.01mg, repeatability 0.02mg) •Provision for automatic weight transfer •Suitable acrylic balance enclosure: Minimum 8mm thick acrylic & 300mm height •Yearly calibration during warranty & AMC | Yes / No / Explain | | |
| 3 | Instrument Control | Compatible latest desktop/Laptop for fast data acquisition and processing with laser jet printer & latest operating system. 8GB RAM minimum, 1TB HDD. Dual LAN card, for connecting instrument and other to Local area network Detail equipment features | Yes / No / Explain | | |

| | | | | | |
|---|------------------------------|--|--------------------|--|--|
| 4 | Optional | <ul style="list-style-type: none"> •All other accessory required for the smooth operation of the instrument like Lab compressor, UPS etc should be specified & offered by the party. | Yes / No / Explain | | |
| 5 | Supply package shall include | <ul style="list-style-type: none"> •Wheel mounted steel/wooden table with bottom shelf/drawers for accommodating the machine, balance, data acquisition unit (PC) and printer. •Free technical support during warranty •Required number of Anti-vibration mounts to be provided | Yes / No / Explain | | |

3. Essential Spares

Item specifications for Essential Spares

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|----------------------|--|--------------------|-----------------------|--------|
| 1 | spares & consumables | <ul style="list-style-type: none"> •All the essential consumables kit sufficient like crucibles, NaOH, Anhydron, accelerators, 'O' ring etc sample carriers sufficient for 3000 samples | Yes / No / Explain | | |

Common Specifications (Applicable for all items)

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|---------------|---|--------------------|-----------------------|--------|
| 1 | Installation | System has to be commissioned, calibrated and demonstrated with all features at user's site | Yes / No / Explain | | |

| | | | | | |
|---|---|--|--------------------|--|--|
| 2 | Warranty | Supplier should provide Warranty for all the equipments at least 36 months from the date of commissioning and acceptance. Yearly calibration has to be provided for balance & equipment during warranty period | Yes / No / Explain | | |
| 3 | AMC Support and spares and after sales service. | AMC & calibration for 5 years after the warranty period shall be quoted including balance Spares and guaranteed after-sales service support for 5 years has to be provided & list and cost of essential spares shall be included in the quote. Party should have a strong service back-up in India with technically competent service engineers trained and certified by the factory. Proof of evidence has to be provided in the quotation. Time required to attend ON CALL basis service is to be mentioned. | Yes / No / Explain | | |

Supporting Documents required from Vendor

1. Authorisation letter from parent company
2. Brochures/catalogue of principal company with details
3. UNPRICED BID showing the split-up of main equipment, accessories, essential spares as applicable
4. Detailed Techno-Commercial Offer (without Price Details)
5. UNPRICED AMC Quote in Split-Up format for each year required.
6. UNPRICED LIST of Essential/Optional Spares for 5 years Maintenance

7. Declaration regarding the percentage of local content (or value addition) in the item offered.

8. Detailed Compliance Matrix vis-a-vis the item specification in tenders

9. Additional Documents from Vendor

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

| Sl. No. | Description | Compliance | Vendor Terms |
|---------|---|--------------------|--------------|
| 1 | Equipment maintenance kit with all necessary tools has to be supplied free of cost | Yes / No / Explain | |
| 2 | The equipment shall be provided with a warranty certificate and calibration certificate with traceability | Yes / No / Explain | |
| 3 | Party should submit technical brochures (parent company), catalogues for all the equipments. | Yes / No / Explain | |
| 4 | Customer satisfaction letter from the users in India/Abroad may be provided as proof of their competency if needed | Yes / No / Explain | |
| 5 | List of similar systems supplied in India with complete contact details of the user like full postal address, Phone number and E- mail ID has to be provided along with the quotation. Non compliance to this condition may lead to rejection of the offer. | Yes / No / Explain | |
| 6 | If the software is upgraded within 5 years from installation the same shall be done free of cost | Yes / No / Explain | |
| 7 | Any software used for the system has to be supplied to VSSC in installable CD/other media, so that the software can be reinstalled at VSSC in case of a system crash. | Yes / No / Explain | |
| 8 | The instrument and accessories must be designed with all necessary safety interlocks and earthing for operators safety | Yes / No / Explain | |
| 9 | Detailed compliance matrix of our specifications and supplier specifications item by item has to be filled and provided along with the quotation. | Yes / No / Explain | |
| 10 | Training for 2 persons on the operation & day-to-day maintenance of all the systems and features has to be provided at user's site. | Yes / No / Explain | |
| 11 | Detailed operational and service manuals in English including essential circuit diagrams for all systems and subsystems have to be provided. | Yes / No / Explain | |
| 12 | Environmental conditions at installation site are as follows Power 230 V , 50 Hz, single phase Humidity 60- 90% relative humidity Ambient temperature: 20 to 35degC. | Yes / No / Explain | |

| | | | |
|----|--|--------------------|--|
| 13 | Methods are to be generated & analysis is to be carried out for user samples after installation. Analysis of sulphur powder with 99.5% purity has to be demonstrated at our site. | Yes / No / Explain | |
| 14 | 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 | |
| 15 | 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 | |
| 16 | Delivery Terms. | Yes / No / Explain | |
| 17 | Delivery Period | Yes / No / Explain | |
| 18 | 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 | |
| 19 | Warranty (for a period of 36 months from the date of commissioning & acceptance of the item at our site) | Yes / No / Explain | |
| 20 | 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 | |

| | | | |
|----|---|--------------------|--|
| 21 | Payment Term: (Our Defalut payment term: 100% within 30 days after receipt and acceptance of item at our site. 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 | |
| 22 | 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 | |
| 23 | 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 | |
| 24 | 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 | |
| 25 | PO Placement Address (with Name and Contact Details of sales person concerned). | Yes / No / Explain | |
| 26 | Any Other Terms | Yes / No / Explain | |
| 27 | Acceptance to provide Non-Comprehensive AMC for a period of 5 yrs after the completion of warranty period. AMC cost shall only be mentioned in the specific slot in price bid. | Yes / No / Explain | |

| | | | |
|----|--|--------------------|--|
| 28 | List of essential spares for the trouble free operation of the equipment to be uploaded (Without price details). Details of optional spares may also be provided (without price details). | Yes / No / Explain | |
| 29 | Kindly ensure that NO DOCUMENTS WITH PRICE DETAILS ARE UPLOADED. Price shall only be mentioned in the price bid. Uploaded documents with price details shall summarily be rejected. | Yes / No / Explain | |
| 30 | Ensure you are a Class-I Local Supplier/ Class-II Local Supplier. The Offer shall be in INR only. Bids from foreign OEMs and Offer on High Sea Sales basis are not allowed. Please mention the category of the bidder. | Yes / No / Explain | |
| 31 | In the price bid, please ensure that you have mentioned the cost of "Essential Spares" only once. If the price is mentioned above in the Price Bid, you shall not mention the price below. | Yes / No / Explain | |

C.3 Price Bid

| Sl. No. | Item | Quantity | Unit Price | Currency | Total Price | Remark |
|---------|-------------------------|-----------|------------|----------|-------------|--------|
| 1 | Carbon Sulphur analyser | 1.00 Nos. | | - | | |
| 2 | Accessories | 1.00 Sets | | - | | |
| 3 | Essential Spares | 1.00 Sets | | - | | |

Common charges (Applicable for all items)

| | |
|--|--|
| Annual Maintenance Contract Charges | |
| Optional Spares Cost (lumpsum) | |
| Any Other Charges | |
| Essential Spares Cost (lumpsum) | |
| Packing and Forwarding Charges | |

| | |
|---|--|
| Freight charge | |
| Installation & Commissioning Charges | |

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

Tender for Universal Testing Machine of 10 kN Capacity

Bids to be submitted online

Tender No.: VSSC/PURCHASE UNIT III (SPRE)/VS202100289401 dated 24-08-2021

A. Tender Details

| | |
|------------------------|---|
| Tender No : | VSSC/PURCHASE UNIT III (SPRE)/VS202100289401 |
| Tender Date : | 24-08-2021 |
| Tender Classification: | GOODS |
| Purchase Entity : | PURCHASE UNIT III (SPRE) |
| Centre : | VIKRAM SARABHAI SPACE CENTRE (VSSC) |

Procurement of Universal Testing Machine of 10 kN Capacity

This Tender is for the procurement of Universal Testing Machine of 10 kN Capacity

This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.

Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.

Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.

This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.

Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.

The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.

In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General

Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

A.1 Tender Schedule

| | |
|------------------------------|-------------------------|
| Bid Submission Start Date : | 24-08-2021 15:00 |
| Bid Clarification Due Date : | 06-09-2021 14:00 |
| Bid Submission Due Date : | 30-09-2021 14:00 |
| Bid Opening Date : | 30-09-2021 14:01 |
| Price Bid Opening Date : | 12-10-2021 14:55 |

B. Tender Attachments

NA

Instructions To Vendors

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2. Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.
3. Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.
4. This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.
5. Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.
6. The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.
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9. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

C. Bid Templates

C.1 Technical Bid - Universal Testing Machine of 10 kN Capacity

1. Universal Testing Machines

Document : Technical specification

Common Specifications (Applicable for all items)

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|---|-------|------------|-----------------------|--------|
| 1 | Universal Testing Machine of 10 kN Capacity for conducting different mechanical tests such as tension, compression, flexure, bend, shear etc. | | - | | |

| | | | | | |
|---|------------------|--|--------------------|--|--|
| 2 | General features | <p>Dual column, Screw driven Servo controlled electromechanical universal testing machine (UTM) Vertically mounted, table top 10 kN UTM in static tension /compression Digital crosshead drives system with fully variable speed control. Interchangeable load cells of 100 N and 10 kN High precision ball screw driven double acting with zero backlash drive system. Integrated digital closed-loop control and data acquisition electronics. Automatic recognition and calibration of load cells / transducers. User selectable system of units: SI, metric and US</p> | Yes / No / Explain | | |
|---|------------------|--|--------------------|--|--|

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|---|------------|--|--------------------|--|--|
| 3 | Load Frame | <p>1) The load capacity: 10 kN</p> <p>2) Vertical Test Space: 1300 mm or better</p> <p>3) Column spacing: Min 400 mm or better</p> <p>4) Total crosshead travel: 1300 mm or better</p> <p>5) Stiffness of the frame: 50 kN/mm (minimum)</p> <p>6) Crosshead Speed range: 0.001-1000 mm/min</p> <p>7) Return Speed Maximum: 1000 mm/min or better</p> <p>8) Accuracy of crosshead speed: 0.1 % of set speed measured over full speed range or better</p> <p>9) Drive system's Position control resolution: 0.04 m or better</p> <p>10) Position measurement accuracy: ± 0.01 mm or 0.05 % or better</p> <p>11) Cross head position repeatability: ± 0.05 mm or better</p> <p>12) Emergency stop button shall be provided</p> <p>13) Load frame should fulfil the CE conformity guidelines as per 2006/42/EG</p> | Yes / No / Explain | | |
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|---|------------------|---|--------------------|--|--|
| 4 | Load Measurement | <p>1) Two interchangeable strain gauge-based load cells for both tension and compression with capacity 10 kN and 100 N meeting calibration and accuracy class 0.5.</p> <p>2) Load range: 0.4 to 100% of the capacity</p> <p>3) Force measurement should conform to ASTM E4, ISO7500-1 Standards.</p> <p>4) Load accuracy: 0.5% of full scale to 1/250 of load cell capacity as per ISO 7500-1 and ASTM E4</p> <p>5) Output Sensitivity:1.8mV/V or higher</p> <p>6) Overload capacity without permanent zero shift: 110% of the capacity or better</p> <p>7) Zero stability: 0.05% of full rated output per hour</p> <p>8) Load cells should be able to resist the unnecessary parasitic influences like bending moment, torque, temperature fluctuations and humidity</p> <p>9) Load cells should be calibrated as per international standards</p> <p>10) The load cells shall be supplied with suitable attachment fittings /kits to fix to the crosshead. (Suitable wedge/ spherical washers for locking the load cell and Piggyback adapter to attach a low-capacity load cell without removing the Primary cell)</p> <p>11) Supplier should be able to calibrate Load cells and UTM cross head speed as per compliance to NABL norms after installation and commissioning of the UTM at VSSC.</p> | Yes / No / Explain | | |
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| | | Valid Calibration certificates for both load cells and UTM cross head speed shall be supplied with traceability. | | | |
| 5 | Drive system and controller | <p>1) Servo motor drive system with integrated digital closed loop control.</p> <p>2) Number of data acquisition channels: 4 or more (load, strain-1 and strain-2, etc.)</p> <p>3) Closed loop test control under three modes (position, load and strain-1 or strain-2.</p> <p>4) Calibrated, stable and repeatable ± 10 V DC output from the four principal data channels (position, load, strain-1, strain-2) to connect to recorders, plotters, etc.</p> | Yes / No / Explain | | |
| 6 | Strain Measurement System | <p>1) Strain measurement accuracy: 0.6 % of reading ± 25 % of calibration point ± 1 count on the display, whichever is greater.</p> <p>2) Strain measurement system should meet ASTM E83 or ISO 9513 or both</p> | Yes / No / Explain | | |

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|---|--------------------|---|--------------------|--|--|
| 7 | Grips and fixtures | <p>1) Grips and fixtures as per ASTM D412, D638, D152, D882</p> <p>2) Pneumatic side action grips of capacity 10 kN and 1 kN (1 set each) with necessary coupling pins equipped with manual air switch</p> <ul style="list-style-type: none"> • Specimen thickness: 0 to 25 mm(10kN), 0 to 12 mm (1kN) • Jaw faces rubber coated (set of 3 faces) • Jaw faces serrated (set of 3 faces) <p>3) Pneumatic foot switch – 1 set capable of connecting directly to the grips</p> <ul style="list-style-type: none"> • Foot operated single pedal switch to open and close grips • Two airlines with quick disconnect fittings for grips and third airline for air supply. <p>4) Self-tightening roller grips for precision testing of elastomeric and flexible plastic materials providing non-slip gripping action with spring action</p> <p>Grip with serrated eccentric roller type clamping action.</p> <p>Sufficient force to hold the material until a load is applied and follow-up action on the roller preventing the specimen from creeping out of the grips as the load increases</p> <p>Capacity: 5 kN</p> <p>Effective length: minimum 100 mm</p> <p>Specimen thickness 0 to 8 mm</p> <p>Temperature: 20°C to 40°C</p> <p>5) Coupling pins for all the fixtures and load cells shall be provided</p> | Yes / No / Explain | | |
|---|--------------------|---|--------------------|--|--|

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|---|-------------------------------|---|--------------------|--|--|
| 8 | Testing standards | All ASTM and ISO and other equivalent international standards. A certificate for the same should be provided. | Yes / No / Explain | | |
| 9 | Data acquisition and analysis | <p>1) User selectable 1 kHz or high synchronized data logging on all channels with time, date and operator stamps.</p> <p>2) Data display: up to 4 channels simultaneous live data display. Online graphical display of user selected channels without interfering with the four channel data display. Provision to add up to more channels of data acquisition</p> <p>3) Data rates should not be affected by the number of temperature and strain channels connected.</p> <p>4) Real time display of graph and calculated results simultaneously.</p> | Yes / No / Explain | | |

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|----|----------|--|--------------------|--|--|
| 10 | Software | <p>1) Ability to perform tensile, compression, flexure cyclic, relaxation, peel, shear tests. Include appropriate calculation list for each type of test as per relevant international test standards (a list of standards should be provided). All the specimen configurations as per the relevant ASTM standards should be possible to give as input in the software.</p> <p>2) Capable of controlling the movement of the crosshead as a function of load, stress, strain or true strain in addition to displacement control.</p> <p>3) Provision for real time numerical displays (digital /analog) for test data.</p> <p>4) Capability to define correction factors such as machine compliance, slack, pretension, load and gauge length.</p> <p>5) The software should have the capability to save the test method along with the start position, limit positions etc. so that the machine automatically comes to the start position for testing when the file is opened.</p> <p>6) Generation of real time graphs and tables of processed test results</p> <p>7) Security with user passwords</p> <p>8) Saving and retrieval of test parameters and data, post-processing of raw data, report generation with basic and user defined calculation parameters. Acquired data shall be</p> | Yes / No / Explain | | |
|----|----------|--|--------------------|--|--|

exportable to MS-Excel format.

9) Support in the customized report templates with an option for linking the test report with a test method.

10) Provision for adding new procedures and techniques by the user (User calculation creator for custom calculations)

11) Test control mode shall be displayed whenever a test is running.

12) Automatic calibration and balancing of load cells / transducers. Prompt for transducer calibration (if not already done) before starting a test.

13) System of Units: SI and Metric (user selectable). Time units: minutes and seconds

14) All Software should be provided in CD or USB drive

15) Any software updates for warranty period from the date of installation should be supplied free of cost.

16) Any bugs in calculations, reporting, logic should be addressed and necessary changes should be incorporated free of cost within the guarantee period.

17) All the software, user interface, menus and help must be in English language only.

18) Calculations library shall have different options for calculations such as modulus, UTS, etc. as well as provision for user to modify the same.

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|----|-------------|--|--------------------|--|--|
| 11 | Accessories | <p>Factory integrated PC with latest OS and printer (latest configuration shall be quoted)</p> <ul style="list-style-type: none"> • PC with Intel Core- i7 or better preferably. • At least 8 GB RAM, 2 TB SATA HDD, DVD writer, Front and Back USB ports, with network interface • VGA graphics or better. • Wireless keyboard, wireless optical scroll mouse. • 24 inch flat wide LED monitor. • Dedicated PC interfaces for the complex process of controlling the testing system and transmitting the data . | Yes / No / Explain | | |
| 12 | Power | Power: 230 V +/-10%, 50 Hz, single phase | Yes / No / Explain | | |
| 13 | Safety | <p>1) The testing machine should satisfy relevant safety requirements for testing systems. A list of same should be provided</p> <p>2) Automatic shutdown: There must be a provision to automatically shut off the electrical power to the machine when the specimen breaks</p> | Yes / No / Explain | | |

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| 14 | Training and User Manuals | <p>1) Training: 3 personnel need to be trained by qualified personnel of the supplier during the time of installation and commissioning (i.e., at VSSC).</p> <p>2) User manual (both operation and maintenance) and certificates: 1 soft copy in a CD/DVS/USB and 1 hard copy (optional but will be highly appreciated) of the detailed user manual, complete with circuit diagrams (mechanical, electronic and electrical) and calibration certificates.</p> <p>3) Installation files: Installation DVDs/USB for the PC and the software shall be supplied along with the equipment.</p> | Yes / No / Explain | | |
| 15 | Warranty and post-supply services | <p>1) The suppliers shall confirm after sales warranty as follows:</p> <ul style="list-style-type: none"> • Supplier shall provide warranty for all the systems and sub systems for at least 36 months from the date of commissioning and acceptance at VSSC. • The first year service includes unlimited priority telephonic support free of cost <p>2) AMC Details: Non-Comprehensive AMC & calibration for 5 years after the warranty period shall be quoted separately.</p> <p>3) Service: The supplier should have an office or an associate (agent) in India to provide after sales service, support and maintenance.</p> <p>4) Undertaking shall be given for provision of after sales service, software updates and spares for a minimum period of 12 years after warranty.</p> | Yes / No / Explain | | |

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|----|--------------------------------|--|--------------------|--|--|
| 16 | Installation and Commissioning | 1) Installation, Commissioning, Demonstration and testing with all features at site(VSSC). 2) Environmental conditions at installation site: • Power: 230 V +/- 10%, 50 Hz, single phase • Humidity: 90% relative humidity. • Ambient temperature: 20 to 35degC. | Yes / No / Explain | | |
| 17 | Acceptance Criterion | The supplier has to demonstrate all the functions of the system according to the specifications after successful installation at VSSC | Yes / No / Explain | | |
| 18 | Optional Accessories | 1) Flexural fixture in accordance with ASTM D790. 2) Compression test kit as per ASTM D695 and D1621-16 with Compression platen, min.130 mm diameter , 25, 50, 100 kN with rigid coupling. | Yes / No / Explain | | |
| 19 | Spares | The vendor should quote for the most common spares that will be required for 5 years of smooth operation after warranty (mention the spares, cost & use of individual items). | Yes / No / Explain | | |

Supporting Documents required from Vendor

1. Budgetary Quotation

2. Brochures/Catalogues of company with details

3. Unpriced Bid showing the split up of main equipment, accessories, essential spares as applicable

4. Detailed Techno commercial offer (without price details)

- 5. Unpriced AMC Quote in Split-up format for each year required.**
- 6. Unpriced list of essential/ optional spares for 3 years maintenance.**
- 7. Declaration regarding the percentage of local content (or value addition) in the item offered.**
- 8. Detailed Compliance Matrix vis-a-vis the item specification in tenders.**
- 9. Additional Documents from Vendor.**

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

| Sl. No. | Description | Compliance | Vendor Terms |
|---------|--|--------------------|--------------|
| 1 | All relevant technical literature / brochures, application notes and specifications must also be provided. | Yes / No / Explain | |
| 2 | The quotation must clearly specify make and model of the equipment. | Yes / No / Explain | |
| 3 | Detailed pre-installation requirements and delivery period should be explicitly mentioned without any ambiguity. | Yes / No / Explain | |
| 4 | Party should have a strong service back-up in India with technically competent service engineers trained and certified by the factory. Documentary proof for the same has to be provided. | Yes / No / Explain | |
| 5 | User list of the quoted model in India with full contact details shall be provided. Noncompliance to this condition may lead to rejection of the offer. | Yes / No / Explain | |
| 6 | Obsolete models should not be quoted. Year of introduction of the quoted model (preferably latest) should be specified | Yes / No / Explain | |
| 7 | The instrument and accessories must be designed with all necessary safety interlocks and earthing for operator safety. | Yes / No / Explain | |
| 8 | Any software used for the system has to be supplied to VSSC in installable CD/USB drive, so that the software can be reinstalled at VSSC in case of a system crash. | Yes / No / Explain | |
| 9 | Supplier should carry out the calibration of all the transducers and sensors traceable to national or international standards after installation and commissioning at VSSC and due certificate has to be provided. | Yes / No / Explain | |
| 10 | Full certifications (ISO and calibration/traceability certificate for any standards used for calibration) has to be provided | Yes / No / Explain | |
| 11 | Detailed operational and service manuals in English including essential circuit diagrams and Trouble-shooting flowchart for all systems and subsystems have to be provided. | Yes / No / Explain | |

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|----|--|--------------------|--|
| 12 | Machine maintenance kit with all necessary tools has to be supplied free of cost. | Yes / No / Explain | |
| 13 | Detailed compliance matrix of our specifications and supplier specifications item by item has to be filled and provided along with the quotation. | Yes / No / Explain | |
| 14 | Quotation shall give full technical details supported by well documented catalogues/ leaflets and evidence for the compliance should be available in the catalogue; without which offer will not be considered. | Yes / No / Explain | |
| 15 | Indian agents submitting the quotation on behalf of foreign suppliers must submit the authorization letter to submit the quotation, negotiation, after sales service, maintenance and repair | Yes / No / Explain | |
| 16 | Only the manufacturer or Approved / Authorized agencies should submit the quote. Relevant certificates need to be attached. | Yes / No / Explain | |
| 17 | Split up cost for instrument, accessories and AMC should be separately provided | Yes / No / Explain | |
| 18 | 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 | |
| 19 | Payment Term: (Our Defalut payment term: For indigenou 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 | |

| | | | |
|----|---|--------------------|--|
| 20 | <p>Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content:</p> <p>a) Equal to or more than 50% : Class-I local supplier.</p> <p>b) More than 20% but less than 50% : Class-II local supplier.</p> <p>c) Less than or equal to 20% : Non-local supplier.</p> <p>Mention your category.</p> | Yes / No / Explain | |
| 21 | <p>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.</p> | Yes / No / Explain | |
| 22 | <p>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.</p> | Yes / No / Explain | |
| 23 | <p>PO Placement Address (with Name and Contact Details of sales person concerned).</p> | - | |
| 24 | <p>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).</p> | Yes / No / Explain | |
| 25 | <p>Any Other Terms</p> | - | |

| | | | |
|----|---|--------------------|--|
| 26 | Delivery Terms. | Yes / No / Explain | |
| 27 | Warranty (For a period of 36 months required, Confirm) | Yes / No / Explain | |
| 28 | 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 | |
| 29 | Delivery Period | Yes / No / Explain | |
| 30 | 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 | |

C.3 Price Bid

| Sl. No. | Item | Quantity | Unit Price | Currency | Total Price | Remark |
|---------|----------------------------|-----------|------------|----------|-------------|--------|
| 1 | Universal Testing Machines | 1.00 Nos. | | - | | |

Common charges (Applicable for all items)

| | |
|---|--|
| P&F Charges | |
| Freight charge | |
| Installation Charges | |
| Documentation & Handling charges | |
| Other Charges (If any) | |

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

Tender for Nozzle Free Ultrasonic Spray coating machine

Bids to be submitted online

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A. Tender Details

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B. Tender Attachments

NA

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2. Last minute clarification on tenders will not be entertained.
2. This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.
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4. Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.
5. This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.
6. Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.
7. The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.
8. In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or

from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

9. False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

10. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

C. Bid Templates

C.1 Technical Bid - Nozzle Free Ultrasonic Spray coating machine

1. Nozzle Free Ultrasonic Coating Machine

Item specifications for Nozzle Free Ultrasonic Coating Machine

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|--|--|--------------------|-----------------------|--------|
| 1 | Spray Coating Type | Nozzle Free Ultrasonic Spray coater | Yes / No / Explain | | |
| 2 | Ultrasound Frequency | 35 ± 5 KHz | Yes / No / Explain | | |
| 3 | Single pass coating width | 10 to 25 mm | Yes / No / Explain | | |
| 4 | Spray Coating Pattern | Rectangular and Circular | Yes / No / Explain | | |
| 5 | Coating thickness uniformity | Single pass coating thickness variation < ± 5% | Yes / No / Explain | | |
| 6 | Coating Slurry Viscosity | up to 40 cp. | Yes / No / Explain | | |
| 7 | Coating Area | 750 x 750 mm (min.) | Yes / No / Explain | | |
| 8 | Coating Slurry Flow Rate | 0.5 to 30 ml/min. | Yes / No / Explain | | |
| 9 | Coating Slurry Reservoir Capacity | 500 ml (min.) | Yes / No / Explain | | |
| 10 | Minimum Slurry Volume required for coating | >25 ml | Yes / No / Explain | | |
| 11 | Coating Slurry solids content | up to 50% solids | Yes / No / Explain | | |
| 12 | Vacuum hot plate size | 750 x 750 mm (min.) | Yes / No / Explain | | |
| 13 | Fluid lines and Substrate holding Vacuum Hot plate compatibility | Shall be compatible with solvents: IPA, N-Methyl Pyrolidone, Butyl Acetate, butyl alcohol and lonomer dispersions which is acidic in nature. | Yes / No / Explain | | |

| | | | | | |
|----|-----------------------------------|---|--------------------|--|--|
| 14 | Spray Head Positioning resolution | 0.025 mm (min.) | Yes / No / Explain | | |
| 15 | Spray Head Positioning accuracy | ± 0.05 mm (min.) | Yes / No / Explain | | |
| 16 | Spray Head speed | 10 to 250 mm/sec | Yes / No / Explain | | |
| 17 | Spray head rotation | 90-degree | Yes / No / Explain | | |
| 18 | Global standards compliance | CE / NFPA 79 or their equivalent | Yes / No / Explain | | |
| 19 | Safety interlocks: | i. Interlocked guard door ii. Servo motor torque limit and limit switches for X-Y movement iii. Alarm for low exhaust / vapour build-up in side spray cabin | Yes / No / Explain | | |
| 20 | Input power | 220 ± 10% VAC, 50/60 Hz, | Yes / No / Explain | | |
| 21 | Detailed Technical Requirements | as given below | Yes / No / Explain | | |

| | | | | | |
|----|---|--|--------------------|--|--|
| 22 | Liquid delivery system | <p>a. Liquid delivery system shall be synchronized with spray heads through control system and software.</p> <p>b. Liquid delivery to the spray head shall be based on stepper motor and liquid dispensing shall be volume based.</p> <p>c. It shall have slurry holding reservoir with provision for stirring and automatic refilling of coating slurry to liquid dispensing system.</p> <p>d. It shall have capability to continuously serve the slurry for production requirement.</p> <p>e. There shall be minimum two liquid delivery syringes to operate the system in continuous production mode and recirculation of the slurry to reservoir to avoid settling of the slurry.</p> <p>f. It shall have built in functions to recover coating slurry from feed lines to back into syringe / reservoir.</p> | Yes / No / Explain | | |
| 23 | Vacuum hot plate for holding substrate: | <p>a. Plate size: 750 mm x 750 mm size (min.)</p> <p>b. Uniformly porous platform with integrated vacuum supply to hold the substrates.</p> <p>c. Integrated heating arrangement up to 150 ± 2 °C with closed loop temperature control.</p> <p>d. Shall be able to evenly hold and heat various size substrates restricted to plate size.</p> | Yes / No / Explain | | |

| | | | | | |
|----|--|--|--------------------|--|--|
| 24 | System control platform: Control platform shall have these features: | <ul style="list-style-type: none"> a. Graphical user interface b. Teach mode, preferably with laser pointer, for precise setting of job/coating area. c. Dry mode to verify the translation of setting from laser mode settings into actual spray head movement d. Programmable options for Spray head cleaning and purging e. 90-degree spray head rotate within 0.5 second, for criss-cross multi-layer coating application | Yes / No / Explain | | |
| 25 | System software: | The application software shall have following features: | Yes / No / Explain | | |
| 26 | Operation Mode/Features: | <ul style="list-style-type: none"> a. Teach mode: with laser pointer for coating area verification b. Dry run Mode : without laser and without spray over coating area c. Run Mode: spraying coating mode d. Coating material filling, refilling e. Recovery and cleaning of coating unit | Yes / No / Explain | | |

| | | | | | |
|----|---------------------------|---|--------------------|--|--|
| 27 | Programming Features: | <ul style="list-style-type: none"> a. Coating area selection assisted by laser pointer b. Coating area selection with point/line coordinates c. Coating liquid flow rate d. Spray Head mode (narrow or wide) e. Spray Head speed f. Spray Head height g. Head rotate option (90° or 0°) h. Air pressure to spray head i. Spray Head auto cleaning and purging option prior to spraying j. Head clean – mid coating recipe as required k. Wait/hold time (required dry time between coating layers) l. Stirring speed, direction and time m. Automatic pump refill volume | Yes / No / Explain | | |
| 28 | Alarms and system status: | <ul style="list-style-type: none"> a. Low system exhausts interlock with bypass mode b. Ultrasonic fault error message & interlock c. X-Y motion fault message & interlock d. Low holding reservoir level alarm e. Empty pump level message & interlock f. Current volume in pump - display g. Coating volume used in recipe – display | Yes / No / Explain | | |

Document : detailed specifications of coating machine

Supporting Documents required from Vendor

1. list of customers to whom nozzlefree ultrasnic coating machine is supplied by the manufacturer.

2. detailed technical specification sheet for the item

3. UNPRICED BID showing the split-up of main equipment, accessories, essential spares as applicable

4. Detailed Techno-Commercial Offer (without Price Details)

5. UNPRICED AMC Quote in Split-Up format for each year required.

6. UNPRICED LIST of Essential/Optional Spares for 7 years Maintenance

7. Declaration regarding the percentage of local content (or value addition) in the item offered.

8. Detailed Compliance Matrix vis-a-vis the item specification in tenders

9. Additional Documents from Vendor

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

| Sl. No. | Description | Compliance | Vendor Terms |
|---------|--|--------------------|--------------|
| 1 | 1. Party shall provide a detailed list of spares. Separate cost split up shall be given for all the subsystems and spares. Shelf life of the spares, if any applicable, shall be clearly mentioned. | Yes / No / Explain | |
| 2 | 2. Manufacturer's letter of authorization / certificate shall be submitted by the supplier. | Yes / No / Explain | |
| 3 | 3. All relevant operation, maintenance and calibration manuals and circuit diagrams, in English, shall be supplied along with the machine. | Yes / No / Explain | |
| 4 | 4. Supplier shall submit all documents including test reports and test certificates with respect to design, materials, fabrication, testing, etc. for pre-delivery inspection at manufacture's site. | Yes / No / Explain | |
| 5 | 5. Pre-delivery inspection shall be decided by VSSC and same shall not be mandatory made by the party for dispatching the equipment. | Yes / No / Explain | |
| 6 | 6. Supplier shall be responsible for installation commissioning of the equipment at our site. | Yes / No / Explain | |
| 7 | 7. Detailed training shall be given to VSSC personnel by service engineer for operation and basic maintenance and calibration of the system at VSSC. | Yes / No / Explain | |
| 8 | 8. Scope of the training in terms of number of hours/days and content shall be detailed in the offer. | Yes / No / Explain | |
| 9 | 9. The offer shall provide a scheme for updating of the application software, whenever there is an update. | Yes / No / Explain | |
| 10 | 10. The equipment shall have minimum three years warranty and 7 years annual maintenance contract after warranty period. | Yes / No / Explain | |
| 11 | 11. Party shall provide separate AMC offer for 7 years after warranty period. AMC offer shall be non-comprehensive and charges per maintenance visit shall be clearly mentioned in the offer. | Yes / No / Explain | |

| | | | |
|----|---|--------------------|--|
| 12 | 12.A clear scheme for carrying out periodic preventive maintenance by service engineer during warranty, and beyond warranty period under an AMC, shall be provided in the relevant offer. | Yes / No / Explain | |
| 13 | 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 | |
| 14 | 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 | |
| 15 | 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 | |
| 16 | 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 | |
| 17 | Delivery Period | Yes / No / Explain | |

| | | | |
|----|---|--------------------|--|
| 18 | PO Placement Address (with Name and Contact Details of sales person concerned). | - | |
| 19 | Delivery Terms. | Yes / No / Explain | |
| 20 | 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 | |
| 21 | 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 | |
| 22 | 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 | |
| 23 | Any Other Terms | Yes / No / Explain | |
| 24 | 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 | |
| 25 | Warranty(for 7 years) CONFIRM | Yes / No / Explain | |

| | | | |
|----|--|--------------------|--|
| 26 | Acceptance to provide Non-Comprehensive AMC for a period of 7 yrs after the completion of warranty period. AMC cost shall only be mentioned in the specific slot in the price bid. | Yes / No / Explain | |
| 27 | List of essential spares for the trouble free operation of the equipment to be uploaded (Without price details). Details of optional spares may also be provided (without price details). | Yes / No / Explain | |
| 28 | Ensure you are a Class-I Local supplier/ Class-II local supplier. The Offer shall be in INR only. Bids from foreign OEMs and Offer on High Sea Sales basis are not allowed. Please mention the category of the bidder. | Yes / No / Explain | |
| 29 | Kindly ensure that NO DOCUMENTS WITH PRICE DETAILS ARE UPLOADED. Price shall only be mentioned in the price bid. Uploaded documents with price details shall summarily be rejected. | Yes / No / Explain | |

C.3 Price Bid

| Sl. No. | Item | Quantity | Unit Price | Currency | Total Price | Remark |
|---------|--|-----------|------------|----------|-------------|--------|
| 1 | Nozzle Free Ultrasonic Coating Machine | 1.00 Nos. | | - | | |

Common charges (Applicable for all items)

| | |
|---|--|
| Annual Maintenance Contract Charges | |
| Optional Spares Cost (lumpsum) | |
| Any Other Charges | |
| Essential Spares Cost (lumpsum) | |
| Packing and Forwarding Charges | |
| Freight charge | |
| Installation & Commissioning Charges | |

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

Tender for Multi unit automatic rubber hardness tester with multi indentors

Bids to be submitted online

Tender No.: VSSC/PURCHASE UNIT III (SPRE)/VS202100315901 dated 25-08-2021

A. Tender Details

| | |
|------------------------|---|
| Tender No : | VSSC/PURCHASE UNIT III (SPRE)/VS202100315901 |
| Tender Date : | 25-08-2021 |
| Tender Classification: | GOODS |
| Purchase Entity : | PURCHASE UNIT III (SPRE) |
| Centre : | VIKRAM SARABHAI SPACE CENTRE (VSSC) |

Procurement of Multi unit automatic rubber hardness tester with multi indentors

This Tender is for the procurement of Multi unit automatic rubber hardness tester with multi indentors
This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.

Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.

Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.

This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.

Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.

The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.

In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General

Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

A.1 Tender Schedule

| | |
|------------------------------|-------------------------|
| Bid Submission Start Date : | 25-08-2021 10:00 |
| Bid Clarification Due Date : | 14-09-2021 12:00 |
| Bid Submission Due Date : | 01-10-2021 14:00 |
| Bid Opening Date : | 01-10-2021 14:01 |
| Price Bid Opening Date : | 19-10-2021 12:00 |

B. Tender Attachments

NA

Instructions To Vendors

1. Instructions to Vendors

1. This is an E Tender. Hence Postal/Fax/Email tenders will not be accepted.
2. Last minute clarification on tenders will not be entertained.
2. This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.
3. Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.
4. Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.
5. This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.
6. Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.
7. The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.
8. In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or

from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

9. False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

10. Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

C. Bid Templates

C.1 Technical Bid - Multi unit automatic rubber hardness tester with multi indentors

1. Multiunit automatic hardness tester with multi indentors

Item specifications for Multiunit automatic hardness tester with multi indentors

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|---------------------|--|--------------------|-----------------------|--------|
| 1 | General Description | Bench top type multi-unit automatic hardness tester. Automatic support for the housing of four units fitted with automatic sample lifting system. At a time 4 units (Sh.A, Micro Sh.A, Sh.D, and IRHD) shall be installed and test shall be performed by rotating the support. | Yes / No / Explain | | |
| 2 | Unit control | Automatic hardness units shall be controlled by electronic console and software. | Yes / No / Explain | | |
| 3 | Control Console | Colour Touch screen display for the control of automatic hardness unit which permits the selection of hardness unit (Type of indentor)., perform automatic multiple test in different point of the same sample, set the number of tests to be performed automatically and the rotation angle between one test and the next one, Set hardness test time, display the test result at the end of the test time, start and stop the automatic execution of the test. | Yes / No / Explain | | |

| | | | | | |
|---|--|---|--------------------|--|--|
| 4 | Operating Software in English along with data acquisition system | <p>System should be loaded with latest licensed full data acquisition software which permits:</p> <ol style="list-style-type: none"> 1. Execution of a customer defined number of tests in different point of the sample with customer defined test time. 2. Analysis of hardness relaxation curve. 3. Statistical analysis of results 4. The software shall be compatible with latest OS. 5. Software shall permit all the activities mentioned in the control console. 6. Compatible latest desktop/ Laptop for fast data acquisition and processing (Make: HCL/Dell/HP) with laser jet printer & latest operating system is also under suppliers scope. <p>8GB RAM minimum, 1TB HDD. Dual LAN card for connecting instrument and other to Local area network</p> | Yes / No / Explain | | |
| 5 | Sample holder with automatic rotation | Sample holder with motor controlled rotation. The device has to be installed on the machine and permits to perform automatic multiple test in different points of the same sample. | Yes / No / Explain | | |
| 6 | Magnifying lens | Magnifying glass with metal frame. Scratch-proof and solvent-resistant lens with magnification of five times. Lens diameter should be minimum 75mm with enlarged magnification area with a diameter of 20mm. | Yes / No / Explain | | |

| | | | | | |
|---|--------------------------------|---|--------------------|--|--|
| 7 | Dimension of the test specimen | The machine shall be capable to hold the specimen of thickness 1.5mm minimum to perform hardness measurement. | Yes / No / Explain | | |
| 8 | Power supply | 230 V +/-10%, 50-60 Hz, single phase | Yes / No / Explain | | |

2. SHORE A MEASURING HEAD and ACCESSORIES

Item specifications for SHORE A MEASURING HEAD and ACCESSORIES

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|--------------------------|--|--------------------|-----------------------|--------|
| 1 | General Description | Shore A testing unit conforming to ASTM D2240 standard to be installed on the multi unit tester. | Yes / No / Explain | | |
| 2 | Range | 0 to 100 Sh.A | Yes / No / Explain | | |
| 3 | Resolution | 0.01 Sh.A | Yes / No / Explain | | |
| 4 | Accuracy | ± 1 Sh.A | Yes / No / Explain | | |
| 5 | Calibration of equipment | The instrument shall be supplied with calibration certificate conforming to ASTM D2240 with traceability. The certificate includes follows: 1. Calibration of the force applied by the spring vs indentation 2. Calibration of the hardness reading vs indentation 3. Calibration of the test time. | Yes / No / Explain | | |

| | | | | | |
|---|----------------------|--|--------------------|--|--|
| 6 | Standard blocks | 5 nos of rubber samples shall be supplied for verification of Shore A tester with standard hardness values of 20-90 Sh.A. The samples should be supplied with 1. Calibration certificate and traceability. 2. Single identification label 3. Wooden protection box | Yes / No / Explain | | |
| 7 | Range of application | Suitable for hardness measuring on flat and curved surfaced specimens with diameter 35 mm and thickness 6 mm prescribed under standards. | Yes / No / Explain | | |

3. MICRO SHORE A MEASURING HEAD and ACCESSORIES

Item specifications for MICRO SHORE A MEASURING HEAD and ACCESSORIES

| SI No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|---------------------|---|--------------------|-----------------------|--------|
| 1 | General Description | Micro Shore A (Shore AM) testing unit conforming to ISO 48-4, ASTM D2240 standard to be installed on the multi unit tester. | Yes / No / Explain | | |
| 2 | Range | 0 to 100 Micro Sh.A | Yes / No / Explain | | |
| 3 | Resolution | 0.01 Micro Sh.A | Yes / No / Explain | | |
| 4 | Accuracy | ± 1 Micro Sh.A | Yes / No / Explain | | |

| | | | | | |
|---|--------------------------|--|--------------------|--|--|
| 5 | Calibration of equipment | The instrument shall be supplied with calibration certificate conforming to ISO 48-4 and ASTM D2240 standard with traceability. The certificate includes follows. 1. Calibration of the force applied by the spring vs indentation 2. Calibration of the hardness reading vs indentation 3. Calibration of the test time. | Yes / No / Explain | | |
| 6 | Standard blocks | 5 nos of rubber samples shall be supplied for verification of Micro Shore A tester with standard hardness values of 20-90 Micro Sh.A. The samples should be supplied with 1. Calibration certificate and traceability. 2. Single identification label 3. Wooden protection box | Yes / No / Explain | | |
| 7 | Range of application | Suitable for hardness measuring on flat and curved surfaced specimens with diameter 1.5mm and thickness 1.5mm prescribed under standards. | Yes / No / Explain | | |

4. SHORE D MEASURING HEAD AND ACCESSORIES

Item specifications for SHORE D MEASURING HEAD AND ACCESSORIES

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|---------------------|---|--------------------|-----------------------|--------|
| 1 | General Description | Shore D testing unit conforming to ASTM D 2240 standard to be installed on the multi unit tester. | Yes / No / Explain | | |
| 2 | Range | 0 to 100 Sh.D | Yes / No / Explain | | |

| | | | | | |
|---|--------------------------|---|--------------------|--|--|
| 3 | Resolution | 0.01 Sh.D | Yes / No / Explain | | |
| 4 | Accuracy | ± 1 Sh.D | Yes / No / Explain | | |
| 5 | Calibration of equipment | The instrument shall be supplied with calibration certificate with traceability. The certificate includes follows. 1. Calibration of the force applied by the spring vs indentation 2. Calibration of the hardness reading vs indentation 3. Calibration of the test time. | Yes / No / Explain | | |
| 6 | Standard blocks | Samples required for verifying minimum 5 measurements with standard hardness values of 20-90 Sh.D. The samples should be supplied with 1. Calibration certificate and traceability. 2. Single identification label 3. Wooden protection box | Yes / No / Explain | | |
| 7 | Range of application | Suitable for hardness measuring on flat and curved surfaced specimens with diameter 35 mm and thickness 6 mm prescribed under standards. | Yes / No / Explain | | |

5. O RING HOLDING DEVICE FOR HARDNESS MEASUREMENT

Item specifications for O RING HOLDING DEVICE FOR HARDNESS MEASUREMENT

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|-----------------------|-------|------------|-----------------------|--------|
| 1 | O RING HOLDING DEVICE | | - | | |

| | | | | | |
|---|------------------------------|--|--------------------|--|--|
| 2 | General Description | This centering device should allow to quickly carry out hardness test of O rings with cross section diameter between 1.5mm to 11mm. | Yes / No / Explain | | |
| 3 | Oring dimension to be tested | Device should be capable of holding Oring with outer diameter of 5mm to 200 mm and Oring cut pieces of minimum 10mm length. | Yes / No / Explain | | |
| 4 | Fixing mechanism | The device has to be applied to the standard plate of the instrument through magnetic fixing which allows rapid installation and removal The adjustment wheel allows you to set the distance between the cylinders according to the cross section diameter of the Oring. The fixing clip for the correct positioning of curved pieces. The integrated extension plate should allow holding large pieces of O ring up to 200mm ID. | Yes / No / Explain | | |

6. DATA ACQUISITION EQUIPMENT and Table

Item specifications for DATA ACQUISITION EQUIPMENT

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|-----------------------|---|--------------------|-----------------------|--------|
| 1 | Data acquisition unit | Intel Core I5 Processor -9th Gen, 8GB Ram, 1 TB Hard disk, 19.5" Monitor, Keyboard Mouse, Windows 10 Professional, +LAN Card, MSOffice Home & Business 2019 | Yes / No / Explain | | |

| | | | | | |
|---|---------|--|--------------------|--|--|
| 2 | Printer | Color Lazer Printer | Yes / No / Explain | | |
| 3 | Table | Wheel mounted Table (steel/wooden) for placing Multi-Unit Hardness Tester, PC and printer. | Yes / No / Explain | | |

Common Specifications (Applicable for all items)

| Sl No | Specification | Value | Compliance | Offered Specification | Remark |
|-------|------------------------------|---|--------------------|-----------------------|--------|
| 1 | Supply package shall include | <ul style="list-style-type: none"> • Life time licensed software with data acquisition unit and laser printer • Wheel mounted steel/wooden table with bottom shelf/drawers for accommodating the machine, data acquisition unit (PC) and printer. • Free technical support & yearly calibration during warranty • Required number of Anti-vibration mounts to be provided | Yes / No / Explain | | |

Supporting Documents required from Vendor

1. Brochures/Catalogues of company with details
2. Unpriced Bid showing the split up of main equipment, accessories, essential spares as applicable
3. Detailed Techno commercial offer (without price details)
4. Unpriced AMC Quote in Split-up format for each year required.
5. Unpriced list of essential/ optional spares for 3 years maintenance.
6. Declaration regarding the percentage of local content (or value addition) in the item offered
7. Detailed Compliance Matrix vis-a-vis the item specification in tenders.

8. Additional Documents from Vendor.

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

| Sl. No. | Description | Compliance | Vendor Terms |
|---------|--|--------------------|--------------|
| 1 | Breakup cost of each item should be provided along with the quote. | Yes / No / Explain | |
| 2 | Installation, Commissioning, Demonstration and Testing at our site | Yes / No / Explain | |
| 3 | System has to be commissioned, calibrated and demonstrated with all features at user's site. Environmental conditions at installation site are as follows: 230 V +/-10%, 50 Hz, single phase, 50-90% relative humidity, 20 to 35 deg C ambient temperature. | Yes / No / Explain | |
| 4 | Detailed operational and service manuals in English including essential circuit diagrams for all systems and subsystems are to be provided. | Yes / No / Explain | |
| 5 | Training for 2 persons on the operation & day-to-day maintenance of all the systems and features has to be provided at user's site. | Yes / No / Explain | |
| 6 | Pre-installation site requirement like electrical shall be provided in the quotation. | Yes / No / Explain | |
| 7 | Supplier shall carry out the calibration of all the transducers and sensors traceable to national or international standards and due certificate has to be provided. | Yes / No / Explain | |
| 8 | Supplier shall provide Warranty for all the systems and sub systems at least 36 months from the date of commissioning and acceptance. | Yes / No / Explain | |
| 9 | AMC & calibration for 3 years after the warranty period shall be quoted separately | Yes / No / Explain | |
| 10 | Spares for the trouble free operation for a minimum of three years after the warranty period shall be provided. | Yes / No / Explain | |
| 11 | List and cost of essential spares during AMC has to be submitted along with quote. | Yes / No / Explain | |
| 12 | Guaranteed after sale service for a minimum of 10 years should be committed. | Yes / No / Explain | |
| 13 | Time required attending ON CALL basis service is to be mentioned. | Yes / No / Explain | |

| | | | |
|----|--|--------------------|--|
| 14 | Detailed compliance matrix of our specifications and supplier specifications item by item has to be filled and provided along with the quotation. | Yes / No / Explain | |
| 15 | The instrument and accessories must be designed with all necessary safety interlocks and earthing for operators' safety. | Yes / No / Explain | |
| 16 | Machine maintenance kit with all necessary tools has to be supplied free of cost. | Yes / No / Explain | |
| 17 | Any software used for the system has to be supplied to VSSC in installable CD media, so that the software can be reinstalled at VSSC in case of a system crash. | Yes / No / Explain | |
| 18 | If the software is upgraded within 5 years from installation the same shall be done free of cost. | Yes / No / Explain | |
| 19 | Party shall submit technical brochures, catalogues for all the subsystems proposed (including bought out items, if any) with full features and capabilities. | Yes / No / Explain | |
| 20 | The equipment shall be provided with a warranty certificate and calibration certificate with traceability. | Yes / No / Explain | |
| 21 | 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 | |
| 22 | 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 | |
| 23 | Delivery Terms. | Yes / No / Explain | |
| 24 | Delivery Period | Yes / No / Explain | |

| | | | |
|----|---|--------------------|--|
| 25 | 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 | |
| 26 | Warranty (for a period of 36 months. Confirm) | Yes / No / Explain | |
| 27 | 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 | |
| 28 | Payment Term: (Our Default 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 | |
| 29 | 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 | |
| 30 | 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 | |

| | | | |
|----|---|--------------------|--|
| 31 | 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 | |
| 32 | PO Placement Address (with Name and Contact Details of sales person concerned). | Yes / No / Explain | |
| 33 | Any Other Terms | Yes / No / Explain | |

C.3 Price Bid

| Sl. No. | Item | Quantity | Unit Price | Currency | Total Price | Remark |
|---------|--|-----------|------------|----------|-------------|--------|
| 1 | Multiunit automatic hardness tester with multi indentors | 1.00 Nos. | | - | | |
| 2 | SHORE A MEASURING HEAD and ACCESSORIES | 1.00 Nos. | | - | | |
| 3 | MICRO SHORE A MEASURING HEAD and ACCESSORIES | 1.00 Nos. | | - | | |
| 4 | SHORE D MEASURING HEAD AND ACCESSORIES | 1.00 Nos. | | - | | |
| 5 | O RING HOLDING DEVICE FOR HARDNESS MEASUREMENT | 1.00 Nos. | | - | | |
| 6 | DATA ACQUISITION EQUIPMENT and Table | 1.00 Nos. | | - | | |

Common charges (Applicable for all items)

| | |
|---|--|
| Annual Maintenance Contract Charges | |
| Optional Spares Cost (lumpsum) | |
| Any Other Charges | |
| Essential Spares Cost (lumpsum) | |
| Packing and Forwarding Charges | |
| Freight charge | |
| Installation & Commissioning Charges | |