

INTER - UNIVERSITY ACCELERATOR CENTRE

(An Autonomous Centre of UGC)
Aruna Asaf Ali Marg, New Delhi - 110067

NOTICE INVITING E - TENDER

Tender No: IUAC/NIT/13/SMK/2020-21

Dated: 17/09/2020

Online Tenders are invited on behalf of the Director Inter-University Accelerator Centre (IUAC), Aruna Asaf Ali Marg, New Delhi-110067 through e-Procurement Portal under two bid system, viz., Technical and Financial bids, from eligible vendors for the “**Supply of Cryogenic Sensors, Meters and other Low Temperature Measurement Accessories as per the Annexure- A**”.

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app> and www.iuac.res.in.

Aspiring bidders who have not enrolled/registered in e-Procurement Portal should enroll/register before participating through the website <http://eprocure.gov.in/eprocure/app>.

Completely filled Bids shall be submitted online only at CPPP website <https://eprocure.gov.in/eprocure/app>. Incomplete/Bids not covering full scope of work included in the bid document, will be rejected and only complete bids will be considered. Tenderers / Contractors / Bidders are advised to follow the instructions provided in the e-procurement portal. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. The Director, IUAC reserves the right to accept / reject any / all tenders in part / full without assigning any reasons whatsoever, and decision of IUAC in this regard will be binding on all bidders.

Bidder has to select the payment option as “online” to pay the tender fee/EMD as applicable by going to link: <https://services.sabpaisa.in/pages/iuac.html>. The earnest money deposit shall be in the form of online payment and it should be deposited before the bid opening. Bidders registered with MSME/NSIC are exempted from payment of EMD & tender fee. Copy of valid registration certificate should be uploaded in the website <https://eprocure.gov.in/eprocure/app>.

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. The standard BOQ format for the price bid given with the tender document should be downloaded and should be filled and submit it online without modifying the format. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

Any Corrigendum / Amendments in respect of above tender shall be issued on IUAC website www.iuac.res.in and website <https://eprocure.gov.in> only. Bidders should take into account any corrigendum published on the tender document and in case of any correspondence for clarifications needed, they may contact Administrative Officer (S&P) before submitting their bids.

The Director, IUAC, New Delhi reserves the right to accept or reject all or any of the tender without assigning any reasons thereof.

INTER-UNIVERSITY ACCELERATOR CENTRE

(An Autonomous Centre of UGC)
Aruna Asaf Ali Marg, New Delhi-110 067

E-TENDER DOCUMENT

Name of the work	“Supply of Cryogenic Sensors, Meters and other Low Temperature Measurement Accessories as per the Annexure- I-II”.
Tender Number	TENDER NO: IUAC/NIT/13/SMK /2020-21
Estimated Tender Amount	₹11,00,000.00 (Eleven lakhs only)
Earnest Money Deposit	₹22,000.00 (Twenty two thousands only)
Tender Cost	₹ 500.00 (Five hundred only)
Online Link for EMD and Tender Fee	https://services.sabpaisa.in/pages/iuac.html
Last Date and Time of Submission of Tender	08/10/2020 at 3.00 p.m.
Date & Time for opening of Tender (Techno-commercial bid – Part-A)	09/10/2020 at 3.30 p.m.
Date & time for opening of Price Bid (Part - B)	To be intimated later on to technically qualified bidders
Contact Person & Address	Administrative Officer (S&P), Email: iuacstores@gmail.com Phones: 011-2412 6018, 2412 6022

Part-I: GENERAL TERMS & CONDITIONS

1. Submission of Tender:

Tenders should be uploaded on CPP portal in two Parts i.e. “Technical Bid” (Part-A) and “Price Bid/BOQ” (Part-B).

2. Technical Bid (Part-A):

In this bid, the bidder shall upload the following relevant documents which are essential for technical qualification:

- a. Earnest money deposit proof
- b. Copies of PAN Number, GST Registration Number certificates of bidding agency
- c. A duly signed authorization certificate from the OEM in case the bidder is not the original manufacturer of the components listed in **Annexure-I**.
- d. Catalogues or data sheet and other technical specifications of the products indicating its ability to meet the technical specifications as per Annexure-II
- e. Copies of work orders of similar type of supply during the last five year to any Govt., Public sector, Autonomous body or reputed Public Ltd. Company, with at least one work of value not less than Rs.10.0 lakhs or two similar works, each of value not less than Rs. 5.0 lakhs or three similar works, each of value not less than Rs. 4.0 lakhs.
- f. Tender Acceptance Letter shall be duly signed & stamped by the bidder.
- g. The bidder shall not be black listed by any government or government department in centre/state/district levels across India. An undertaking in this regard as per Annexure-IV be enclosed with the technical bid.

Special Note:

- 1. All documents uploaded by the bidder should be self-attested along with stamp.*
- 2. Technical bids which are not confirming to the technical specifications will be disqualified.*

3. Price Bid / BOQ (Part-B):

In this bid, the bidder is required to quote his price (in INR) of items upto its delivery at IUAC basis in the standard .XLS format provided and no other format is acceptable. IUAC would provide GST/Custom certificate. Appropriate certificates will be issued to the successful bidder. Bidders are advised to quote all items in the BOQ. Incomplete price bid will be rejected. The bidders should quote unconditional rates, neatly written without any overwriting and all pages should be duly signed & stamped.

4. Validity of Tender:

Tender shall be valid for our acceptance without any change in the rates and NIT conditions for a period of 90 days from the date of opening the price bid. No escalation of cost will be acceptable in any condition after opening of the tender.

5. Earnest Money Deposit (EMD):

- a. The bidders with valid registration with MSME / NSIC quoting directly are exempted

from payments of EMD and tender fee

- b. Copy of the valid registration certificate of NSIC/MSME should be uploaded.
- c. Photocopy of application for registration at NSIC or for renewal of MSME/NSIC will not be acceptable. Such bid will be treated as the bid received without EMD.
- d. EMD of technically disqualified bidders will be returned within 15 days from the date of evaluation of the technical bids. The refund of EMD to the unsuccessful bidders shall also be returned within 15 days from the date of opening of price bid. The EMD of the successful bidder (L1) shall be held back as security deposit and will be released only after submission of performance bank guarantee

6. Escalation / Deviation:

No escalation or deviation shall be allowed till execution of order / contract.

7. Terms of Payment

The payment will be done after delivery of the items at IUAC and submission original invoice certified by the concerned official at IUAC -New Delhi.

A payment of 90% will be released after delivery of the items at IUAC

The remaining 10% payment will be released against a Performance Bank Guarantee (PBG) in the form of fixed deposit or Bank Guarantee from a commercial bank within 10 days from the issuance of LOI / purchase order. PBG should remain valid for a period of 60 days beyond the completion of all contractual obligations of the supplier including warranty obligation .

8. Guarantee/Defect liability period

The supplied material should guarantee for the manufacturing / engineering defect and bad material/workmanship for a minimum period of 1 (one) year from the date of acceptance of the goods by IUAC. During this period if any replacement of item, repairs/rectification etc. is needed, the supplier shall do the same free of cost to IUAC.

9. Delivery Period

The material should be supplied within 90 days from the date of issue of LOI / purchase order. Any delay in completion of the supply due to reasons attributable to the vendor / manufacturer is liable to liquidated damages as per clause 10 of this NIT. However, under the force-majeure conditions as per clause 11 of NIT, IUAC may grant suitable time extension for which vendor has to request along with the justification / reasons well in advance to the Director, IUAC for approval without any prejudice or price escalation.

10. Liquidated Damage

In case supply is delays beyond the specified delivery date, deductions on account of liquidate damage @1% per week or thereof will be deducted subjected to maximum of 10% of order value.

11. Force Majeure

IUAC may grant an extension of time limit set for the supply items in case it is delayed by force majeure beyond the supplier's control. Force majeure is defined an event of effect that cannot reasonably be anticipated such as acts of God (like earthquakes, floods, tsunami etc.), the direct and indirect consequences of wars (declared or undeclared), national emergencies, civil commotions and strikes (only those which exceeds a duration of ten continuous days) at vendor's factory. Apart from the extension of the time limit, force majeure does not entitle the successful tenderer to any relaxation or to any compensation of damage or loss suffered. The decision of the Director, IUAC will be final and binding for the vendor.

12. Correspondence:

All the correspondence in respect of tender / contractual obligation shall be made to "*The administrative Officer (S&P), Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi – 110067*". E-mail: iuacstores@gmail.com, Telephone: +91-11-24126018, 24126022.

13. Tender Liable to Rejection:

- a. The Director, IUAC reserves the right to accept/reject any/all tenders in part/full without assigning any reason whatsoever and the decision of the IUAC in this regard will be binding on all the bidders.
- b. Bids received by means other than e - procurement portal will be rejected.
- c. Bids not covering full scope of supply of the products will be rejected and only complete bids will be considered.
- d. If BOQ file is found to be modified by the bidder, the bid will be rejected.
- e. Tenders not complying with any of the terms and condition stated in this tender document are liable to be rejected.

14. Actual Quantity

The number of items and the corresponding quantities may vary in actual order. IUAC has right to select the final list of items and quantity in the actual order. Order will be given to the bidder with the lowest price for the finally selected items with their desired quantities.

15. The Director, IUAC reserves the right to reject or accept any or all the tenders in full or in part without assigning any reasons whatsoever, and the decision of the Centre in this regard will be binding on all the bidders. Tenders not complying with any of the provisions stated in this tender document are liable to be rejected.

16. This notice inviting tender will form part of the contract agreement to be executed by the successful tenderer with the IUAC. The successful bidder shall have to sign the contract agreement within 10 days of the allotment of work.

17. The contract shall be governed by the Indian Laws. Any dispute arising out of this contract will be subjected to jurisdiction of New Delhi / Delhi.

Accepted
(Signature of Bidder)

Annexure - I

List of items and their tentative quantities*

<u>Item Sl. No.</u>	<u>Manufacturer Product Code</u>	<u>Make</u>	<u>Qty</u>
1	Cernox Sensor in SD Package	Lakeshore Cryotronics Inc	1
2	Cernox Sensor in CU Package	Lakeshore Cryotronics Inc	1
3	Eight channel Cryogenic Temperature Monitor	Lakeshore Cryotronics Inc	1
4	Silicon Diode in SD Package	Lakeshore Cryotronics Inc	1
5	Silicon Diode in CU Package	Lakeshore Cryotronics Inc	1
6	Phosphor Bronze Quad Twist 32 AWG Wire	Lakeshore Cryotronics Inc	30m
7	Phosphor Bronze Deo Twist 32 AWG Wire	Lakeshore Cryotronics Inc	150m
8	Phosphor Bronze Quad Twist 36 AWG Wire	Lakeshore Cryotronics Inc	30m
9	Phosphor Bronze Deo Twist 36 AWG Wire	Lakeshore Cryotronics Inc	150m
10	Manganin Wire	Lakeshore Cryotronics Inc	30m
11	Cartridge Heater	Watlow /Lakeshore Cryotronics Inc	2
12	Apiezon N Grease	Apiezon/ Lakeshore Cryotronics Inc	2

* The number of items and quantities may vary in the actual order

Name & Signature of Tenderer
Company with Seal

Annexure - II

Detailed Technical Specification

1. Cernox Sensor in SD Package	
Description	Specifications
Temperature range	1.4 to 325 K
Recommended excitation	10 mV or less for T > 1.2 K
Reproducibility	±3-5 mK at 4.2 K
Thermal response time (typical)	< 20 ms at 4.2 K, ≤ 1s at 77 K, ≤ 1 s at 273 K
Dissipation at recommended excitation	< 10 ⁻⁶ W at 4.2 K
Calibration	Calibrated chart (1050 band)
Package	SD
2. Cernox Sensor in CU Package	
Description	Specifications
Temperature range	1.4 to 325 K
Recommended excitation	10 mV or less for T > 1.2 K
Reproducibility	±3-5 mK at 4.2 K
Dissipation at recommended excitation	< 10 ⁻⁶ W at 4.2 K,
Calibration	Calibrated chart (1050 band)
Package	CU
3. Eight Channel Cryogenic Temperature Monitor	
Description	Specifications
Number of inputs	8
Measurement type	4-lead differential
Excitation	Eight constant current source
Input Configuration	Two groups of four. Each group must contain same input type
Supported sensors	RTDs: Cernox®, 100Ω Platinum, 1000 Ω Platinum, Germanium, Carbon-Glass, and Rox™ carbon resistors, silicone diode
Standard curves	DT-470, DT-670, , PT-100, PT-1000,
Input connector	25-pin D-sub
Software support	LabVIEW™ driver
Serial Interface	RS 232C
Update rate	To 16 rdg/s
Power requirement	220, 240 VAC, ±10%, 50 Hz, 35 VA
Voltage output	Analog Voltage / at least 2 No
4. Silicon Diode in SD Package	
Description	Specifications
Temperature range	1.4 to 325 K
Standard curve	Curve DT-670
Recommended excitation	10 μA ±0.1%

Max reverse voltage	30-40 V
Max current before damage	1 mA continuous or 100 mA pulsed
Dissipation at recommended excitation	15-20 μ W at 4.2 K
Thermal response time SD	<15 ms at 4.2 K, < 150 ms at 77 K, < 250 ms at 305 K
Reproducibility	\pm 10-15 mK at 4.2 K
Calibration	Calibrated chart DT 600series
Package	SD

5. Silicon Diode in CU Package

Description	Specifications
Temperature range	1.4 to 325 K
Standard curve	Curve DT-670
Recommended excitation	10 μ A \pm 0.1%
Max reverse voltage	40 V
Max current before damage	1 mA continuous or 100 mA pulsed
Dissipation at recommended excitation	< 20 μ W at 4.2 K
Reproducibility	1 \pm 10 mK at 4.2 K
Calibration	Calibrated DT-600 Series
Package	CU

6. Phosphor Bronze Quad -Twist 32 AWG Wire

Description	Specifications
Melting range	1200 K to 1350 K
Coefficient of thermal expansion	< 2×10^{-5}
Material	Phosphor-Bronze
Electrical resistivity (at 293 K)	< 15 $\mu\Omega \cdot \text{cm}$
Thermal conductivity (W/(m•K)) at 4 K	1.6
Insulation	Polyimide insulated
AWG	32

7. Phosphor Bronze Deo -twist 32 AWG Wire

Description	Specifications
Melting range	1200 K to 1350 K
Coefficient of thermal expansion	< 2×10^{-5}
Material	Phosphor-bronze
Electrical resistivity (at 293 K)	< 15 $\mu\Omega \cdot \text{cm}$
Thermal conductivity (W/(m•K)) at 4 K	1.6
Insulation	Polyimide insulated
AWG	32

8. Phosphor Bronze Quad- Twist 36 AWG Wire

Description	Specifications
Melting range	1200 K to 1350 K
Coefficient of thermal expansion	< 2×10^{-5}
Material	Phosphorus Bronze
Electrical resistivity at 293 K	< 15 $\mu\Omega \cdot \text{cm}$
Thermal conductivity (W/(m•K)) at 4 K	1.6
Insulation	Formvar insulated

AWG	36
9. Phosphor Bronze Duo -Twist 36 AWG Wire	
Description	Specifications
Melting range	1200 K to 1350 K
Coefficient of thermal expansion	$<2 \times 10^{-5}$
Material	Phosphorus Bronze
Electrical resistivity at 293K	$< 15 \mu\Omega\cdot\text{cm}$
Thermal conductivity (W/(m•K)) at 4 K	1.6
Insulation	Formvar insulated
AWG	36
10. Manganin wire	
Description	Specifications
Melting range	1250-1300 K
Coefficient of thermal expansion	$< 25 \times 10^{-6}$
Chemical composition (nominal)	83% copper, 13% manganese, 4% nickel
Electrical resistivity at 293 K	$48 \mu\Omega\cdot\text{cm}$
Thermal conductivity (W/(m•K)) at 4 K	0.5
Insulation	Formvar insulated
AWG	32
11. Cartridge Heater	
Description	Specifications
Heater Resistance	25 Ω
Power	100W
Temperature range	4.2 K to 373 K
Current	1 A at 100 VDC
Contacts	High nickel iron alloy
Insulation between leads and case	Magnesium oxide
12. Apiezon-N Grease	
Description	Specifications
Approximate melting point	$< 320 \text{ K}$
Thermal conductivity	0.005 W/ (m•K) at 4.2K
Vapor pressure at 293 K:	$< 3 \times 10^{-7} \text{ Pa}$

Annexure -III

(Price should be quoted in the standard BOQ.XLS format of this tender)

Name of Work/Supply: Supply of Cryogenic Sensors, Meters and other Low Temperature Measurement Accessories as per the Annexure- I".

A. For Indian Vendor

Sl. No.	Items	Quantity
1	Cernox Sensor in SD Package	1
2	Cernox Sensor in CU Package	1
3	Eight channel Cryogenic Temperature Monitor	1
4	Silicon Diode in SD Package	1
5	Silicon Diode in CU Package	1
6	Phosphor Bronze Quad Twist 32 AWG Wire	30m
7	Phosphor Bronze Deo Twist 32 AWG Wire	150m
8	Phosphor Bronze Quad Twist 36 AWG Wire	30m
9	Phosphor Bronze Deo Twist 36 AWG Wire	150m
10	Manganin Wire	30m
11	Cartridge Heater	2
12	Apiezon N Grease	2
13	Packaging and forwarding upto IUAC Delhi	
14	GST	

Name & Signature of Tenderer
Company with Seal

Annexure-IV

TENDER ACCEPTANCE LETTER

(To be printed on Company Letter Head)

Date: _____

To
The Administrative Officer (S&P)
Inter-University Accelerator Centre
Aruna Asaf Ali Marg
New Delhi-110 067.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: _____

Dear Sir,

We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

as per your advertisement, given in the above-mentioned website(s).

We hereby certify that we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and we shall abide hereby by the terms / conditions / clauses contained therein.

The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.

We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.

We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt.Department/ Public sector undertaking.

We certify that all information furnished by our Firm is true & correct and, in the event, that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)