

## Tender notice

### General Terms and Conditions

From

The Chairman  
Department of Chemistry  
Panjab University, Chandigarh

Dear Sir,

This University is interested in the purchase , installation and commissioning of some equipment as per the technical specifications given in the Annexure A.

- (a) Separate performa-Invoices for each of the equipment are invited from the interested Principals/manufacturers/authorized agents for supply of same. The Performa-Invoice should be in triplicate and in the name of the Chairman, Department Of Chemistry & Center Of Advanced Studies, Panjab University, Chandigarh.

**The date of receipt of the offer 19.02.2015 is up to 1700hours** and 15 days from date of publication of the tender.

- (b) The Technical bid shall be opened at 3.00 p.m. on the next working day from the last date of receipt of tenders. The date and time for opening of the Price Bids shall be the 4<sup>th</sup> day of the opening of the technical bid. In case the date of opening of the bids fall on the day which is declared public holiday, these shall be opened on the following day at the same time.
- (c) Only manufacturers or their sole authorized distributors/sole agents are entitled to submit the Performa Invoice from the Principals, otherwise tender shall not be considered. All offers other than those from the manufacturers should be supported by an authority letter from the manufacturers authorizing the firm to participate in the tender on their behalf. Certificate or a Photostat copy thereof to the effect that you are the manufacturers/ authorized sole distributors of the equipment or sole agents for manufacturers on whose behalf you are quoting, must be included in the documents.
- (d) The tenderer must be a manufacturer or his authorized agent (specifically against this tender for the subject goods) and should have successfully executed contract for similar and/or identical goods in the past three years prior to the date of tender opening.
- (e) The detailed technical specifications are given in Annexure A.
- (f) Technical specifications are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, brand names and/or catalogue numbers in its bids, provided that it demonstrates to the purchaser's satisfaction.

## **GUARANTEE/WARRANTY & AMC/CMC**

- (a) Guarantee/warranty shall be quoted for 36 months after successful installation of Unit.
- (b) In addition to quoting for the equipment, tenderers must quote the charges for Annual Maintenance Contract (AMC) for a period of 2 years for maintaining the equipment at this University after the period of warranty/guarantee. During, the service contract period, the firm shall provide four preventive maintenance visits and in addition to this attending to all emergent and break-down calls will have to be done. The service contract charges should be quoted for labor cost only and should not include the cost of any replacement part/components that may be needing replacement. During the service contract period replacement of parts/components that may be needing replacement will have to be made available to the Institute by the firm at the Institute's own expense. The charges shall be paid to the firm in quarterly instalments after satisfactory service.
- (c) In addition to quoting the charges for the AMC, the firm must also quote the charges for comprehensive Maintenance Contract (CMC) for a period of 5 years after the completion of service period of guarantee/warranty. The CMC charges should be quoted for labor cost as well as cost of any replacement parts/components that may be required for keeping the equipment functional.
- (d) Tenders not containing service contract charges shall be considered incomplete and shall be outrightly rejected. The charges of AMC and CMC will also be taken into account while comparing the prices.

The tenderer shall give a list of institutions/universities/research labs in India where their equipment had been installed. The University reserves the right to inspect such institutions/labs and see actual performance of such equipment. The Department may also ask for demonstration of the equipment in the department at the time of technical evaluation, which shall be mandatory.

### **BID, GUARANTEE AND SECURITY:**

The tenderer is required to furnish Bid Guarantee and Security as per Annexure 'B'.

### **CONVERSION TO SINGLE CURRENCY:**

To facilitate evaluation and comparison, the purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid price is payable, to the Indian rupees at the RC selling market rate of exchange established by the State Bank of India, Chandigarh for similar transactions as on the last date of submission of tenders

**MERGER/ACQUISITION OF FOREIGN PRINCIPAL:**

In case of Foreign Principal with another Firm or acquisition of Foreign Principals by another firm, it shall be obligatory for the New Entity so formed after the merger or the Acquiring Firm, as the case may be to take over all the duties and obligations/liabilities of the Foreign Principals and the New Entity/Acquiring Firm **would ip so** facto become liable for all acts of commission or omission on the part original Foreign Principals.

**DETAILED INSTRUCTIONS FOR SUBMISSION OF TENDER:**

Any effort by a bidder to influence the purchaser in the purchasers bid evaluation, bid comparison or contract award decisions shall result in the rejection of the bidder's bid and also banning of business dealings with the bidder for a period of three years from the date of such ban.

The detailed instructions for the preparation and submission of the tender and the terms and conditions of the tender are given in the enclosed Annexure A Tenderers must note carefully that any infringement of the specific requirements contained therein may invalidate the tender.

Chairperson  
Department of Chemistry  
Panjab University,  
Chandigarh

### Other Instructions

1. A person signing the tender form or any other document forming part of the contract on behalf of another shall be deemed to warrant that he has authority to bid such others and if on enquiry it appears that the person so signing had no authority to do so, the purchaser may without prejudice to other civil and criminal remedies against the contract, hold the signatory liable for all costs and damages and forfeit the Earnest Money.
  - (i) Rates and Service charges should not be quoted in the Technical bid.
  - (ii) All pages of the technical Bid/Price Bid shall be page numbered. In case of triplicate copies, separate copies shall be page numbered separately.
2. Tenders/Performance Invoices not accompanied by detailed information as required, are liable to be rejected.

### EARNEST MONEY DEPOSIT AND PERFORMANCE BOND: BANK GUARANTEE

- a) The tender must be accompanied the following fees
  - (i) Tender fee of Rs 500/- in the shape of Bank Draft in favour of 'The Registrar, Panjab University, Chandigarh'
  - (ii) Earnest Money as detailed below in a lump sum amount in the form of Demand Draft valid for one year on a scheduled bank/term deposit receipt valid for a period of one year from any scheduled bank in the name of the Registrar, Panjab University, Chandigarh. Earnest Money in any other form will not be accepted F.O.R.  
Cost of equipment up to Rs. 10.00 Lacs: Earnest money: Rs: 25,000/-  
Between Rs. 10.00 Lacs to Rs. 20.00 Lacs: Earnest money: Rs. 40,000/-  
Between Rs. 20.00 Lacs to Rs. 50.00 Lacs: Earnest money: Rs. 50,000/-  
Beyond Rs. 50.00 Lacs: Earnest money: Rs. 1.00 Lac.
- b) Bids not accompanied by tender fee and Earnest Money as stated above or less than the amount stipulated above shall be summarily rejected.
- c) Earnest Money/security deposit/any other sums of the tenderers lying with the University in connection with and other tender/case will not be considered against this tender.
- d) The successful tenderer shall be required to furnish a Contract Performance Guarantee Bond in the shape of Bank Guarantee in favour of Chairperson of respective department of Panjab University along with the undertaking as at Annexure E-i) for an amount equivalent to 2% for AMC/5% for CMC of the FOB value, or as the case may be of the equipment towards the

execution of the Agreement and warranty. The Bank Guarantee should be valid for 30 months. The Bank Guarantee for 2% for AMC/5% for CMC of the FOR value shall be submitted within a period of 30 days after the placement of the Supply Order failing which the order will be liable to be cancelled and the earnest money forfeited.

- e) The University would return the earnest money mentioned to the successful tendering firm on the submission of the Bank Guarantee, to cover the service contract period after the expiry of guarantee/warranty period of 36 months.
  - f) The successful tenderer will submit Bank Guarantee equivalent of 2% of the FOR value in case of AMC or 5% of the FOB value in case of CMC, as the case may be.
6. The University does not pledge itself to accept the lowest, tender, and reserves to itself the right of acceptance of the whole or a part of the tender, or portion of the quantity offered, and the tenderers shall be required to supply the same at the rate quoted. The University reserves to itself the right to accept or reject a part or all the tenders without assigning any reason thereof.

#### **CUSTOM CLEARANCE:**

The equipment requiring import from abroad will be imported under the OGL scheme, for which tenderer will ensure before shipment takes place, that the equipment, in question, can be imported under the said scheme.

- a. The equipment will be got cleared from the Custom by the tenderer at their own cost, demurrage if any will be borne by the tenderer.
- b. It will be the responsibility of the tenderer to pursue and claims with the customs authorities/Insurance company/cargo operators and transporters, as may arise, at any stage.
- c. The N.M.I.C. (Not Manufactured in India Certificate) and the CDEC (Custom Duty Exemption Certificate) will be provided by the University.

#### **INSURANCE**

- 7. (i) The manufacturers will ensure that the equipment is properly insured for the full C.I.F. value to cover the transit up to site of installation and the further period of storage etc. up to end of the period of installation as agreed upon. If the installation is delayed beyond the agreed date of satisfactory installation, commissioning and handing over of the equipment, then in that event any transit and storage damages which come to light after such delays shall be at the risk and cost of the tenderers. The tenderers/Indian Agent shall provide to the University after due inspection, a detailed list of any loss or damage to the stores that may have

occurred so as to enable the purchaser to file appropriate claims with the Insurance company. However, it shall be the responsibility of the University department of prepare, lodge and pursue any claims that may arise with the Insurance Company/ies. The manufacturers shall provide all assistance in pursuing such insurance claims expeditiously. The manufacturers shall make free replacement, if required, in lieu of damaged/lost items, etc. regardless of the fact whether the claim is settled by the underwriters or not. The manufactures liability shall be restricted to making free replacements/rectifications and any local expenses such as custom duty/clearance, etc. connected with such replacements.

It should be noted that if in consideration of offer of earlier delivery, the contract is placed with a higher tenderer in preference to the lowest acceptable offer, and in case of failure to complete supplies in terms of such contract within the date of delivery specified and incorporated in the contract the tenderer will be liable to pay to the University the difference between the contract rate and that of the lowest acceptable tender on her basis of the final prices FOB destination including all elements of freight, sales tax, local taxes, duties and other incidentals. This is in addition to and without prejudice to other rights of the Institute to recover all other losses and damages resulting from delayed supplies, cancellation of contract and risk purchases required to be made in case of failure to supply the stores.

## GUARANTEE/WARRANTY

The guarantee/warranty against defects of manufacture/workmanship and poor quality of components for the entire equipment and work conducted under the contract shall be for a period of 36 months. The term satisfactory commissioning and handing over wherever used in terms of tender and Agreement will mean satisfactory and faultless functioning of the equipment for 90 days, and of works conducted there with covered under the contract in working order. During the guarantee/warranty period, the replacement of any part of the equipment or rectification of defects of works will be free of cost. Further, the defective parts/equipment shall be returned by the purchaser to the Indian Agent after making replacement. During the guarantee/warranty period the uptime as defined in Para 15 will be required to be maintained if the down-time exceeds five consecutive days as defined in Para 15 at any time the guarantee/warranty period will be extended beyond twenty four months to a duration equal to the total of such periods of downtime during the period of warranty.

8. The tenderer will be required to furnish guarantee/warranty as under:
  - a. The tenderer should submit a written guarantee/warranty from the manufacturers stating that the equipment being offered is the latest model as per specifications and that spares for the equipment will be available for a period of at least 10 years after the guarantee/warranty period. The manufacturer should also warranty/guarantee that it will keep the Institute informed of any up-date of the equipment over a period of next 5 years and undertake to provide the same to the Institute at no extra cost.
  - b. Guarantee/warranty that they will supply regularly and items of spare parts requisitioned by the purchaser for satisfactory operation of the equipment till the life span, to be decided mutually of the equipment, if and when required on agreed basis for an agreed price. The agreed basis could be an agreed discount on the published catalogue price or an agreed percentage of profit on the landed cost.
  - c. Guarantee/warranty to the effect that before going out of production of spare parts the manufacturers and/or tenderer will give adequate advance notice to the purchaser of the equipment so that the later may undertake to procure the balance of the life time requirements of spare parts.
  - d. The guarantee/warranty to the effect that the manufacturers will make available to the University, the blue-prints and drawings of the spare parts if and when required in connection with the equipment.
9. The tenderer shall furnish the following warranty/guarantee in case the contact is placed on him:

- (a) The hereby declares that the goods/articles supplied to the purchaser under his contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications and particulars contained/mentioned in the clauses here of and the tenderer hereby guarantee/warranty that the said goods/articles conform to the description and quality aforesaid. The purchaser will be entitled to reject the said goods/articles or such portion thereof as may be discovered not to conform to the said description and quality. Such rejection of goods/articles will be at the seller's risks and all the provisions herein contained relating to rejection of goods, etc. shall apply. The contractor/seller, shall, if called upon to do so, replace within a period of fourteen days or such further period as may be extended from time to time by the purchaser at his discretion, on an application made thereof by the tenderer, the goods/articles or such portion thereof as rejected by the purchaser. In such an event, the above mentioned warranty/guarantee period of the entire equipment shall be extended by the time such damage as may arise be reason of breach of the conditions herein contained. Nothing herein contained shall prejudice any other right of the purchaser in that behalf.
- (b) Tenderer should state categorically whether they have fully trained technical staff for installation/commissioning of the equipment and efficient after sales service.
- (c) Tenderers should categorically confirm that they will give free "After sales services" during guarantee/warranty period as stipulated in the Clause 10 (i) /Annexure C from the date of installation, satisfactory commissioning and handing over of the project/equipment. Warranty for a period less than as stipulated in Para 10 (i) or with conditions may render, the tender invalid.
- (d) It is specifically required that the tenderer will supply all the operating and service manuals alongwith blue-prints and drawings including circuit diagrams of the equipment supplied as well as its components.

**MODE OF DISPATCH. DELIVERY AND COMMISSIONING OF EQUIPMENT:**

The equipment with all its accessories should be dispatched by air to Delhi (INDIA) duly insured, freight and insurance charges pre-paid. The tenderer is required to undertake to deliver, install, commission and handover the equipment within the stipulated period. The installation of the equipment shall be completed and handed over within the time schedule given in the tender. This stipulated period should be strictly adhered to for implementation.

**10. FOR DELAY IN CONTRACT**

The successful bidder will be required to enter into an Agreement with the University on a non-judicial paper of Rs. 30.00 for the supply and satisfactory installation of the equipment as defined above as per specifications and terms and conditions listed in the document and agreed upon.



11. The whole system will be operated by the company engineers/experts for VO days i.e. till satisfactory installation and cover clause 10(i)
  
12. TRAINING OF PERSONNEL  
 The successful tenderer will be required to undertake to provide at his cost technical training for personnel involved in the use of the equipment at site at University immediately after its installation. For this purpose, the company experts shall be required to operate and train the University personnel at site at University for a minimum period of one month at the company's cost.

Microwave application	The System must incorporate a modular design composed of a diffused , Microwave Reactor Module and should be able to handle polar, non-polar, caustic solvents, and carry out various organic, Inorganic reactions and Nanomaterial syntheses.
-----------------------	--

13. SUPPLY, INSTALLATION AND COMMISSIONING OF THE EQUIPMENT:  
 The supply, installation and commissioning of the equipment shall be as per term and conditions given in this annexure and those given in the Agreement to be signed by the successful tenderer. The scope of work includes the installation and satisfactory commissioning of the equipment by the firm and training of personnel.

### **Microwave Synthesis System Specifications**

#### **Specifications: Microwave Synthesis system**

Microwave assisted synthesis system capable of carrying out various reactions including. Nanomaterial synthesis, organic, and inorganic syntheses using various polar, non-polar and caustic solvents.

Microwave Power	Multimode/Monomode magnetron system with disperse/focussed microwave energy for Homogeneous microwave distribution throughout the cavity. System should have power output of 1200 Watts or more of continuous microwave power with a control in increments of programmable 1 Watt Over the whole range for precise reaction control.
Vessels	Pressure vessels of the following specifications should be offered for both High Pressure/Temperature and Extreme Pressure/Temperature conditions. (should be provided with documentary evidence) a) High Pressure/Temperature vessels with PTFE Liner and Ceramic Jacket – (08 vessels) 1) Volume: 0.5 - 80 mL or more 2) Pressure: 1- 60 bar or more 3) 25-150 °C or higher for High Pressure/Temp Vessels 4) Maximum temperature and pressure specifications must be available at the same time. 5) Each pressure vessels must be individually tested & delivered with pressure test certificate. 6) Information related to the lifetime of these vessels at standard MW operating conditions should be specified. b) Quartz vessels for Extreme Pressure/Temperature: >75 bar or more (04 vessels) 1) Max Operation Temperature: 300 °C at 80 bar for Extreme Pressure/Temp Vessels 2) Maximum Material Design Pressure: 50% (bar) or higher above of the maximum operating pressure at 300 °C. 3) System should be capable of carrying out all applications including near critical water chemistry at high temperature and pressure. Accordingly all required accessories and software should be quoted.
High performance Rotor system	a) Rotor system must be capable of processing 08 or more reaction vessels simultaneously. b) Must have active pressure measurement and control on all vessel Positions via pressure sensors (08) (need to disclose how these works) and transfer of data to the instrument.
Sensor system – Temperature and Pressure monitoring, and Feedback Control	a) The system must incorporate the ability for temperature measurement and Feedback Control. This temperature control system must be noninvasive and have a working range up to 300 °C. b) System must have dual temperature sensors of IR and immersing temperature probe for both types of required vessels for accurate temperature measurement and control with transmission of data to the system electronics. c) System should have integrated simultaneous pressure control in all vessels positions in rotor and active pressure monitoring system with Transmission of data to system electronics for safe and precise reaction control at high temperatures.
In situ Stirring	System should have in-built magnetic stirring capability to affect the stirring of the reaction contents for all vessel positions (stirring speed 1000 rpm or better).

Safety Features	<p>a) Should have adequate protection for magnetron protection from reflected Energy.</p> <p>b) Must have heavy-duty stainless steel door with shatter-proof glass window, pressure relieving door with safety interlocks</p> <p>c) Should have software safeguards for rotor identification and overpressure settings.</p> <p>d) There should not be any electronic plugs/sockets inside the oven cavity to prevent corrosion of cables and lower cost of long term operation</p>
Special Application and Specific Accessories	<p>System must have</p> <p>a) Gas addition kit: For addition of inert or reagent gases to the vessel at a gas pressure of 10 bar or more.</p> <p>b) The system should be certified as capable of performing all types of common organic reactions. The system should be capable of efficiently heating non-polar solvents to high temperature and must be quoted with necessary accessories for heating non-polar solvents (e.g. Silicon Carbide (SiC) or equivalent material quoted magnetic beads or heating elements)</p>
Flexibility and Convenience of operation.	<p>a) System must allow the user to change all operating parameters in the midst of the run.</p> <p>b) System must have built-in control and touchscreen graphic display for all routine operations. It should have possibility of connection with an external PC to view the process.</p> <p>c) Should have possibility to store, modify and recall custom programs for process runs.</p> <p>d) There should be provision of transferring data by USB port/ or serial port/ or Ethernet port/ or RS 232 port.</p>
Accessories	<p>a) All other necessary accessories should be quoted with lead-time to procure for smooth functioning of the instruments.</p> <p>b) The system should be equipped with a display option and keypad containing operating parameters. In addition to its stand-alone functioning capability, the system must have the option to be connected to the PC. Minimum five licenses of necessary software, needed to be operated through PC, should be quoted.</p> <p>c) Optional: 1) Vendor should also quote for N<sub>2</sub> cylinder with regulator for gas loading applications. 2) Vendor should also quote the additional consumable items like both type of vessels, liners, caps, stir bar, heating Elements, and other required accessories. 3) Latest configuration PC</p>
Warranty	<p>a) System must carry a minimum five year comprehensive onsite warranty on parts and labor. The supplier should certify that the spares will be available at least for 10 years in future.</p>

- 1) The supplier will have to take care of onsite installation, demonstration and training. Required training for smooth operation of the instrument should be provided free of charge during and after installation.
- 2) Since this reactor will be a central facility, it must be possible to upgrade in future for a variety of applications viz. Microwave Assisted Photosynthesis with UV lamps, parallel synthesis with more than 50 small scale reactions of mg size, sample drying, microwave assisted acid digestion, leaching, oxygen combustion, sample drying, etc.
- 3) Vendor should enclose full list of users in India. Installation in reputed international reference laboratories should be cited and published papers with application may be attached along with technical bid.