

मौलाना आज़ाद राष्ट्रीय प्रौद्योगिकी संस्थान भोपाल  
Maulana Azad National Institute of Technology Bhopal  
(भारत सरकार, शिक्षामंत्रालय के अधीन राष्ट्रीय महत्वका संस्थान)  
(An Institution of National Importance under MoE, Govt. of India)



सीमित निविदा पूछताछ

**LIMITED TENDER ENQUIRY**

सामग्री / वस्तुकानाम  
Name of Goods/Items

Cascade refrigeration cycle Test rig

Website [www.manit.ac.in](http://www.manit.ac.in)

Fax No: 0755-2670562

Email Address: [info@manit.ac.in](mailto:info@manit.ac.in)

Telephone No: 0755-4051000, 0755-4052000

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<i>मौलाना आज़ाद राष्ट्रीय प्रौद्योगिकी संस्थान, भोपाल</i>	
<i>Maulana Azad National Institute of Technology Bhopal</i>	
(भारत सरकार, शिक्षामंत्रालय के अधीनराष्ट्रीय महत्वका संस्थान)	
(An Institution of National Importance under MoE, Govt. of India)	
No. MANIT/ME/2025:002	दिनांक / Date: 14/08/2025
<b>निविदाआमंत्रण सूचना</b>	
<b>NOTICE INVITING TENDERS</b>	
सामग्री / वस्तुकानाम Name of Goods/Items	Cascade refrigeration cycle Test rig.
<p>उपरोक्त सामग्री / वस्तु के लिए निविदाएँ आमंत्रित की जाती हैं। इच्छुक निर्माता/अधिकृतभागीदार/ एंजेन्सियाँ, अधिक जानकारी के लिए संस्थान के वेबसाईट <a href="http://www.manit.ac.in">www.manit.ac.in</a> और CPPP वेबसाईट <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a> पर लाग-इन कर सकती हैं। निविदा दस्तावेज डाउन लोड कर विधिवत रूप से उप-कुलसचिव (भण्डार एवं क्रय) मौलाना आज़ाद राष्ट्रीय प्रौद्योगिकी संस्थान, भोपाल-462003 जमा किया जा सकता है।</p> <p>सम्पूर्ण निविदा मय दस्तावेज प्रस्तुत करने की अंतिम तिथि 03/09/2025 ..... अपरान्ह 12.00 बजे तक है। संस्थान निदेशक, बिना कोई कारण बताए किसी या संपूर्ण निविदा को पूर्ण या आंशिक रूप से स्वीकार या अस्वीकार करने का अधिकार सुरक्षित है।</p>	
कुलसचिव	
<p>Tenders are invited for aforesaid Goods/ Items. Interested Manufacturers/Authorized Partner/Agencies may log on Institute website <a href="http://www.manit.ac.in">www.manit.ac.in</a> and CPPP website <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a> for further details. Tender Document can be downloaded and the duly completed be submitted to the Deputy Registrar(Stores &amp; Purchase) Maulana Azad National Institute of Technology- Bhopal- 462003.</p> <p>Last date of submission of complete tender document is 03/09/2025 _ up to 12.00 hours. The Director of the Institute reserves the right to accept or reject any or the entire tender in full or in part without assigning any reason whatsoever.</p>	
<b>Registrar</b>	

*मौलानाआज़ादराष्ट्रीय प्रौद्योगिकीसंस्थान, भोपाल*  
*Maulana Azad National Institute of Technology Bhopal*

एक नजर में महत्वपूर्ण जानकारियाँ		
IMPORTANT INFORMATION AT A GLANCE		
निविदा क्रमांक एवं दिनांक Tender No & Date	No. MANIT/ ME/2025: 002 Date: 14/08/2025	
निविदाकार्यक्षेत्र / SCOPE OF TENDER		
सामग्री / वस्तुकासंक्षिप्तविवरण Brief Description of Goods/Items	संख्या Quantity	टिप्पणी Remarks
Cascade refrigeration cycle Test rig	01	संलग्नक- Iपरविस्तृतविवरण Detailed Specification at Annexure-I
निविदा की अनुमानितलागत Estimated cost of Tender	Rs. 501500.00 (five lakhs Fifteen hundred only)	
आपूर्ति एवंस्थापनाकारस्थान Location of Supplies & Installation	Mechanical Engineering.	
निविदादस्तावेजकीउपलब्धता Availability of Tender Document	<a href="http://www.manit.ac.in">www.manit.ac.in</a> <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a>	
निविदाजमाकरने के अंतिमदिनांक एवं समय Last Date & Time of Submission of Tender	<b>03/09/2025__ up to 12:00 hours</b>	
निविदा खुलने की दिनांक एवं समय Date & Time of Opening of Bids	<b>04/09/2025 __ at 15:00 hours</b>	
निविदावैधता की अवधि Tender Validity period	<b>60 days</b> from the date of opening of the Technical Bid	
वितरण/आपूर्ति की अवधि Delivery/ Supply period	<b>04 to 06 weeks</b> from the date of issue of Supply Order	
वारंटीअवधि Warranty Period	01 year (s) from the date of successful Installation & Commissioning of equipments/ items	
बोलीसुरक्षा / बयानाराशि Bid Security/ EMD	As per slab mentioned in the document.	
निष्पादनसुरक्षाराशि Performance Security Amount	As per slab mentioned in the document	

**बोलीदाता के लियेनिर्देश/अनुदेश / INSTRUCTIONS TO BIDDERS**

<b>1</b>	<b>Scope of Supplies &amp; Work:</b>
a	The Goods/ Items shall be supplied as per the Bill of Quantity and Specifications mentioned in <b>ANNEXURE-I</b> . However higher specification of equipment may be considered subject to their cost economics competitiveness.
b	Bidder should supply illustrated leaflet giving technical details of Goods/ Item and attach the same with the tender to facilitate evaluation.
c	No option(s) regarding price of Goods/ Items shall be entertained in the price bid. Bidder should quote the price of only one best & appropriate model of Good/Item available with them.
d	Purchase Preference will be given to “Make in India products” as defined in Purchase Preference with Local Content (PP-LC) Policy. Accordingly, bidders with Local Content less than or equal to 20% will be treated as “Non Local Supplier”. The prescribed LC shall be applicable on the date of Bid opening. The bidder shall submit an undertaking along with the bid stating the bidder meets the mandatory minimum LC requirement and such undertaking shall become a part of the contract. Local content certificate from practicing Cost Accountant or practicing Chartered Accountant giving the percentage of local content shall be acceptable. The local content certificate shall be submitted along with each invoice raised.
e	Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs). If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer)of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY.
f	Bidder may be asked to supply sample of offered product/item before supply in bulk quantities.
g	Where ISI certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only. The warranty/AMC required must be specified
h	After the supply of Goods/ Items& Accessories as mentioned in the <b>ANNEXURE-I</b> , the bidder has to execute its installation at the designated location(s).No extra cost shall be paid for this reason.
<b>2</b>	<b>Delivery of Supplies &amp; Installation:</b>
a	The purchaser interested for complete delivery of equipments along with Installation, Testing and Commissioningwithin the period as mentioned at IMPORTANT INFORMATION AT GLANCE sheet.However, the bidder has an option to submit the best delivery with installation time.
b	The material shall be inspected on receipt at site and bidder shall be responsible for any damage during the transit of Goods/Items.
c	The insurance cover including insuring the goods against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery/ installation shall be obtained by bidder in his own name and not in the name of

		purchases.			
3	<b>Warranty &amp; After Sales Services:</b>				
	a	The bidder shall offer on-site comprehensive warranty of equipments as mentioned at IMPORTANT INFORMATION AT GLANCE sheet at the designated location & shall cover each and every part of the equipments including parts having limited life etc. The purchaser is not liable to pay any extra charges on any account during warranty period.			
	b	The bidder shall ensure to render after sales services during the warranty period to the satisfaction of purchaser.			
4	<b>Eligibility Criteria:</b>				
	a	Bidder/ OEM should be a Company/Partnership firm/ Proprietary firm/ Agency and operational from at least 03 years (Three) as on close date of tender. Copy of registration shall be attached.			
	b	The Bidder/ OEM must have supplied Goods/ Items in last three years to Central/State government/ Quasi-Government organization/ Public listed company in India. Copies of one same/similar product/Equipment Purchase Order (PO) Without erasing Consideration Price shall be attached.			
	c	Bidder / OEM should have minimum annual turnover (Double value of estimated cost of tender) in last year .CA certification in this regard is to be submitted.			
	d	The Earnest Money Deposition slip/ proof of payment.			
	e	Bidder/ OEM should have GST Number & Income PAN both.			
	f	OEM Authorization Letter			
5	<b>Earnest Money Deposit:</b>				
	The bidder is instructed to submit EMD in the form of DD/FDR/RTGS/NEFT/BG/Bank deposition slip along with bid to prove the transfer of payment to the purchaser's Account as per EMD slab mentioned below:				
	<b>Tender Value</b>	<b>EMD Rate</b>	<b>Remarks</b>		
	Less than 2.50 Lakhs	NIL			
	Between 2.50 lakhs to 25.00 Lakhs	2% of TenderValue rounded off in nearest in 100 rupees.			
	a	Purchaser's Bank Account details:			
		<b>Account Name</b>	<b>Bank Name</b>	<b>Bank A/c No.</b>	<b>Bank IFS Code</b>
		Director MANIT Bhopal	State Bank of India	10020150107	SBIN0001608
	b	The EMD will be returned to the unsuccessful bidders soon after placement of order and successful bidder shall get its EMD after supply of material.			
	c	The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category. Manufacturers for goods and service providers for services are eligible for exemption from EMD under MSE Category. Traders are excluded from the purview of this policy.			
6	<b>Amendment of Tender Document:</b>				
	a	At any time prior to the date submission of bids, the purchaser, may, for any reason, whether at its own initiative or in response to a clarification sought by a prospective bidder, amend bid document by issuing corrigendum. The corrigendum will be notified/ published in e-tendering website <a href="http://www.eprocure.gov.in/epublish/app">www.eprocure.gov.in/epublish/app</a> and Institute website only.			
7	<b>Price Bid</b>				
	a	The Prices should be quoted in Indian Rupees only.			
	b	Purchaser (being a research Institution) is registered with the Department of			

		Scientific & Industrial Research (DSIR) for the purpose of availing custom duty exemption in terms of GoI Notification No. 51/96-Customs dated 23 July 1996. The bidder should quote their prices considering the exemption certificate. If any certification needed by bidder, may be given to avail this benefit.
	c	Bidder shall take into account all costs including unloading at the location of purchaser, cartage etc. for giving delivery of material at site(s) before quoting the rates. In this regard no claim what so ever shall be entertained.
	d	The bidders are advised not to indicate any separate discount. Discount, if any, should be merged with the quoted unit prices.
	e	The price quoted in price bid shall be firm but subject to change in rate of applicable taxes if any.
	f	The Bidder should avoid the use of vague term such as “Extra as applicable”. Such offers shall be treated as non-responsive.
	g	No extra payment shall be paid on account of any discrepancy in nomenclature of items. The bidder shall seek clarifications if any before submitting the tender.
8	<b>Bid Submission:</b>	
		The bidder is instructed to give their offline offer through Single bid system for this tender. The tender must be placed in a properly sealed envelope super-scribed “ Cascade refrigeration cycle Test rig” with tender inquiry number and its due date addressed to The Director, Maulana Azad National Institute of Technology- Bhopal- 462003 and must reach the office of <b>The Deputy Registrar- Stores &amp; Purchase, Maulana Azad National Institute of Technology, Bhopal</b> on or before as mentioned at IMPORTANT INFORMATION AT GLANCE sheet. The sealed Envelop should be consisting of followings:
	a	Copy of Certificate of Registration of firm, GST Number and Income Tax PAN.
	b	Proof of submission of EMD amount
	c	Copy of Purchase Order (PO) received from government shall be attached.
	d	Certificate mentioning of Turnover for the last year and Bidder / OEM authorization letter.
	e	<b>BOQ Annexure-I and Price Bid Annexure-II</b> duly filled and signed.
9	<b>Evaluation of Bids:</b>	
		The Institute may evaluate all the required Goods/Items in this tender together or independent depending upon nature of items & compatibility and compare the quotations determined to be substantially responsive i.e. which
	a	are properly signed;
	b	Confirm to the eligibility criteria of the vendor; and
	c	Confirm to the terms & conditions, and technical specifications.
	d	In case, required goods/items in this tender are independent and complete in nature. Institute may evaluate independently as far as price is concerned for placing order(s).
10	<b>Validity of Tender:</b>	
	a	The tender shall be valid as mentioned at IMPORTANT INFORMATION AT GLANCE sheet. Terms and financial details submitted in the bid shall be treated as firm during the validity period.
	b	In exceptional circumstances, prior to the expiry of the bid validity period, the purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.

11	<b>Notification of Award:</b>			
	a	Prior to the expiry of the period of bid validity, the purchaser shall notify the successful bidder, in writing, that its bid has been accepted. The notification letter shall specify the sum that the purchaser will pay to the bidder in consideration of the <i>Supply of Goods/ Items</i> with the details of selected location.		
	b	Purchase/ Contract order shall preferably be issued in favour of bidder. Bidder may request in advance for issuance of Purchase/ Contract order in favour of OEM of product. In this case billing and payment shall be made to OEM only.		
12	<b>Performance Security Deposit:</b>			
	The bidder is required to submit Performance Security in the form of DD/FDR/RTGS/NEFT/BG/Bank Deposit after installation of material along with the bill to the Institute as per slab mentioned below:			
	<b>Order/ Contract Value</b>		<b>PSD Rate</b>	<b>PSD Period</b>
	Less than 2.50 Lakhs		NIL	Warranty period plus two month extra
	Between 2.50 lakhs to 25.00 Lakhs		5% of Tender Value rounded off in nearest in 100 rupees.	
	a	Purchaser's Bank Account details:		
		<b>Account Name</b>	<b>Bank Name</b>	<b>Bank A/c No.</b>
		Director MANIT Bhopal	State Bank of India	10020150107
	b	In case of breach of contract, performance security shall be forfeited and the bidder shall be blacklisted for such period as decided by the competent authority in addition to cancellation of order.		
	c	Performance Security shall be returned to the bidder without any interest, whatsoever, after completion warranty period as specified in the tender.		
13	<b>Penalty Clause:</b>			
	a	The bidder shall indicate the period within which the ordered quantity will be supplied along with Installation & Commissioning of Goods/ Items. The bidder shall note that in case bidder fails to do so within the period of delivery indicated by the bidder in price bid of this tender, penalty @ 0.50 % on total value of the PO per week of delay would be levied subject to maximum 20 weeks. It means, the bidder shall have the liability of delayed supply to the maximum of 20 weeks after expiry of scheduled delivery date.		
14	<b>Terms of Payment:</b>			
	a	The Payment shall be made within 30 days by purchaser after supply and installation of Goods/ Items.		
15	<b>Jurisdiction:</b>			
	a	In the event of any dispute the legal matter shall be subjected to the jurisdiction of Bhopal court only.		
16	Details of Contact Persons for Query if any			
	Name	Rakesh kumar Singh	Dr .K.R.Aharwal	
	Designation	Junior Assistant	Professor	
	Tel No	09893144171	9406668576	
	Email		kraharwal@gmail.com	

मौलानाआज़ादराष्ट्रीय प्रौद्योगिकीसंस्थान, भोपाल  
Maulana AzadNational Institute of Technology Bhopal

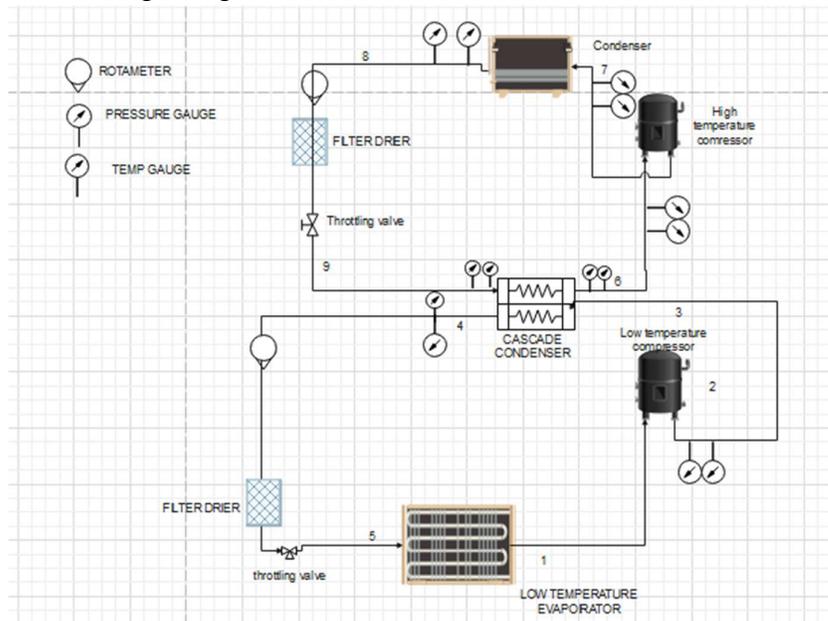
## सामग्री की मात्रा एवंविवरण

**BILL OF QUANTITY AND SPECIFICATION**

SN	Name of Product/ Items : Cascade refrigeration cycle Test rig	Quantity	Remarks
1.	Evaporator Stainless steel grade ASTM 304 tank of dimensions of inner dimensions 0.35 m x 0.35 m x 0.35 m consisting of bare tube copper coils. Inner and outer Stainless sheets in tank must be 1.25 mm with 150 mm PUF insulation in between with a door that must be opened from top fitted with compatible gasket.	01 No	
2.	Ethylene glycol: Water 50:50 To be kept inside tank. Also provide thermocouple sensor inside tank(45 litres)	01No	
3.	High Pressure side Compressor  Hermetically sealed recip. type compressor with a cooling capacity of 2 kW to 2.5kW(approx.)at -5 C Evaporator Temperature and 40 C Condenser Temperature as shown in schematic diagram for refrigerant <b>R600a</b> ; Make Danfoss, Emerson, Bitzer or Tecumseh	01 No	
4.	Low pressure side compressor  Hermetically sealed reciprocating type with a cooling capacity of 1.5 kW to 2kW(approx.) at -30 C Evaporator Temperature; 0 C Condenser temperature as shown in schematic diagram for refrigerant <b>R290</b> ; Make:Danfoss, Emerson, Bitzer or Tecumseh	01 No	
5.	Condenser Air-cooled condenser with copper fins with heat rejection capacity of 2.5 kW to 3 kW	01 No	
6.	Cascade Condenser  Tube and Tube type Condenser with copper tubes/Plate Type heat Exchanger with heat rejection capacity of 2 kW to 2.5 kW	01 No.	
7.	Thermostatic expansion valve  01 Each for high Temperature and low temperature side	02 No.	
8.	Pressure Gauge (R290)		

	As per the schematic diagram. Preferable to use thermocouples that can be attached to data logger		
9.	HP/LP cut-out  01 No. Each of Danfoss or equivalent for high Temperature as well as low temperature side		
10.	Service valves  As per the requirement		
11.	Rota Meter  As per the requirement		
12.	Control Panel  <ul style="list-style-type: none"> <li>(i) Standard make on/off switch with mains indicator</li> <li>(ii) Provision for varying Evaporator temperature/pressure in low temperature side</li> <li>(iii) Provision for varying condenser temperature/pressure in cascade condenser in low temperature side</li> <li>(iv) Provision for varying evaporator temperature/pressure in cascade condenser in high temperature side</li> <li>(v) Digital Energy meters in high temperature as well as low temperature side to be provided for measuring electricity consumption</li> <li>(vi) Digital Pressure as well as temperature measurement with the help of data logger as per schematic diagram</li> <li>(vii) Data Logger with Labview based data logging software to be provided</li> <li>(viii) Computer interface: Data Acquisition Card, Sensors &amp; based software to be provided for studying different characteristics of cascade refrigeration system. Online measurement and performance analysis along with Data logging.</li> <li>(ix) Instruction manual with experimental procedures and block diagram to be provided.</li> <li>(x) ThermoCouple sensors to be provided at each of pressure and temperature sensors as per the schematic dwg.</li> </ul>		

NB: Drawing/ Design is enclosed herewith.



We confirm with our acceptance to the technical specification as given above.		
Date:		BIDDER'S NAME & SIGNATURE WITH SEAL

				<b>ANNEXURE- II</b>		
<b>FORMAT FOR SUBMISSION OF BID PRICE</b>						
To,						
The Director						
MANIT- Bhopal- 462 003						
Sub: <b>Tender Document dated 00/00/2024.</b>						
SN	Product Description with make & Model	Discounted unit price	Qty	Qty Price	GST	Total Price
1	2	3	4	5	6	7(5+6)
1						
2						
Total offered Price						
Total ( In Words):						
Delivery Period required:						
The followings things are confirmed and undertake by us that:						
a	The price quoted above are inclusive of statutory Levies & Taxes, Duties, Transportation and other charges (Insurance, Loading/ unloading, Packing & Forwarding charges, Installation etc.) at site.					
b	Taxes are subject to change/ revision.					
c	We agree with the terms and conditions specified in “Instructions to Bidders” and if selected, the execution of supplies would be made as per bill of Quantity & Specification.					
Date:			Signature of Authorized Bidder with proper rubber stamp			
			Name:			
			Designation:			
			Mobile No:			