



राष्ट्रीय प्रौद्योगिकी संस्थान सिक्किम
NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM
(An Institute of National Importance, Ministry of Education, Govt. of India)

REQUEST FOR QUOTATION (RFQ)

By hand

To,

Enquiry No: 45/NITS/ME/ REFRIGERATION
& AIR CONDITIONING LAB ITEM
PURCHASE/2019-20/60

Date: 22.12.2020

Dear Sir/Madam,

The National Institute of Technology Sikkim invites quotation for the procurement of following items:

S. No.	Description of Material	Qty	Name of Brand	Rate	GST	Other Charges	Total Amount
1	MODEL OF HERMETICALLY SEALED COMPRESSOR WITH TOOL KIT (NON WORKING)	1 (One)					
2	MODEL OF SEMI HERMETICALLY SEALED COMPRESSOR (NON WORKING)	1 (One)					
3	WINDOW AIR CONDITIONER MODEL (NON WORKING)	1 (One)					
4	AIR CONDITIONING TEST UNIT, DETERMINATION OF BYPASS FACTOR AND PLOTTING OF THE COOLING – DEHUMIDIFICATION PROCESS The unit will consists of a duct, in which air flow is to be generated by an axial flow fan. A cooling coil, air heaters and a steam injector are to be fitted in the duct. Adjustable flappers are to be provided in duct to control the air flow. At reduced flow rates of air, cooling coil can be used as dehumidifier. The condensing unit and steam generator are to be located below the air flow duct. A steam generator with electrical heater is to be provided below the duct, which is to be connected with steam injector in the duct. The steam injection is to be controlled by a valve. Various measurements are to be provided so that different processes of air conditioning can be	1 (One)					

	<p>studied.</p> <p style="text-align: center;">Specifications</p> <ul style="list-style-type: none"> • Compressor - 0.5 ton (approx.) capacity, hermetically sealed, using refrigerant R-134a. • Finned tube condenser with fan. • Capillary tube. • Finned tube direct expansion evaporator fitted in a duct of cross section of 250 x 250 mm. • Fan to generate the air flow over the evaporator coil. • Steam generator with electrical heater and steam injector. • Heaters in the duct. • Measurement and controls- Thermometers for cooling cycle and dry/wet bulb air temperatures. Energymeters for compressor and heater input. Pressure gauges to measure condensing and evaporating pressures. • High / low pressure cutout. • Necessary switches. • Flow control flappers in the duct. <p style="text-align: center;">EXPERIMENTS</p> <ul style="list-style-type: none"> • Study of summer cooling OR winter heating cycle. • Operation of system as window air conditioner. (Closed circuit) • Study of humidification and dehumidification. • Measuring by-pass factor. 							
5	<p>THERMO-ELECTRIC REFRIGERATION SYSTEM- Test Rig</p> <p>A Thermoelectric (TE) Cooler, sometimes called a Thermoelectric Module or Peltier Cooler, is a semiconductor-based electronic component that functions as a small heat pump. By applying a low voltage DC power source to a TE module, heat will be moved through the module from one side to the other.</p> <p style="text-align: center;">Specifications</p> <ul style="list-style-type: none"> • Capacity : 43 liters • Fan: to be Provided • Semiconductor : Bismuth And Antimony • Conductors: to be Provided. 	1 (One)						

<ul style="list-style-type: none"> • Evaporator : Forced convection type • Material Of Construction : M.S. & Fiber Cooler • Supply : 230 Volts, 50 Hz, 1 PH • Temperature Indicator: 6 Channel Facility with digital display. <p style="text-align: center;">EXPERIMENTS</p> <ul style="list-style-type: none"> • To study phenomenon of thermoelectric refrigeration. • To evaluate the COP of the system. 							
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Total Amount in Words

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Terms and conditions including instructions to bidders and conditions of contract are attached.

Sincerely,

Name:
Designation:

(For those opting to quote through this Request for Quotation)

We offer the above mentioned price for the requested materials. Further we agree with the terms and conditions of the RFQ.

Name of Firm:
Address :
Contact No & Email:
PAN/GSTN:

Signature & Seal

Terms and Conditions

1. The quotation should be in the format provided by NIT Sikkim. It may either be provided by filling in the details in the Request for Quotation or through a separate page. The quotation must be duly stamped signed, dated, trade license in the relevant field, GST and PAN of the bidder.
2. The prices quoted should be FOR NIT Sikkim and must include all incidental charges for delivery up to NIT Sikkim. Taxes if any should be clearly indicated in the quotation. The rates of taxes should be clearly spelt out in the quotation.
3. All materials are subjected to inspection and approval before acceptance.
4. The material must be delivered within 30 days of the issue of the purchase order. Failure to comply with the same shall result in liquidated damages recovered @ 1% per week.
5. Payment shall normally be made within 30 days of the receipt and acceptance of materials on site.

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6. The institute reserves the right to not accept the lowest price as the sole criteria for award of the purchase order. The quality requirement of the institute shall not be compromised in any case. The institute may ask any bidder to submit the sample of the material/ list of supply (to other Institutes) before award of the order or visit the site for clarification.
 7. The institute reserves the right to increase or decrease the quantity of the material depending on the need of the institute.
 8. Submission of quotation shall be deemed to be the acceptance of the conditions in this document the Income tax Act 1961 and the GST Act 2017.
 9. All disputes arising out of this contract shall be referred to the sole arbitration of Director, NIT Sikkim.
 10. After successful installation and satisfactory result full amount of bid (including GST) will be released.

I, hereby, declare that, the supplier of instruments (if selected) will abide by the rules, terms and conditions attached with request for quotation (RFQ) format. I accept that, in case failure of even a single Terms and conditions supplier will be liable to rejection of quotation application.

Date:

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Place:

Signature and seal