



UNIVERSITY OF CALCUTTA
Centre for Research in Nanoscience and Nanotechnology
JD-2, Sector-III, Salt Lake City
Kolkata- 700106

NOTICE INVITING TENDER

Sealed Quotations are invited from reputed suppliers or manufacture for the 5 TR Water Chiller System in Clean Room Block at CRNN.

1	N.I.T No	Dir/168/XRD/5TR Water Chiller/NIT/CRNN(2016) Date: 04.03.2016
2	Name of Work	Supply of 5 TR Water Chiller for XRD System at Clean Room block of Technology Campus (Acharya Prafulla Chandra Roy Siksha Prangan), Salt Lake.
3	Time of completion	Within 1 month from issuing Order.
4	Eligibility Criteria	Appendix A1
5	Technical Specification	Appendix A
6	Last date of Application for participating in bid	29/07/2016 (up to 2.00 PM)
7	Last date of Collection of Quotation Papers	02/08/2016 (up to 2.00 PM)
8	Last date of dropping of Quotation	05/08/2016 (up to 2.00 PM)
9	Date of opening of Quotation	-

For details enquiry & further correspondence feel free to contract CRNN office at any working day between 11.00 am to 5.00pm.

N. B. The authority reserves the right to reject any or all tenders/quotation without assigning any reason what so ever.

Director, CRNN

APPENDIX-A1

University of Calcutta has procured an X-Ray Diffractometer (Model: SmartLab 9KW, Make-Rigaku, Japan) for its Center for Research in Nanoscience and Nanotechnology, Saltlake, JD-2, Sector-3, Kolkata-98. **Quotations are invited from bonafide Original Equipment Manufacturers/Vendors for a water Chiller with 5TR capacity** to be installed at the same address for the supplying water to the X-Ray tubes of the said X-Ray diffractometers. The details of the tender specification are given herewith:

1) Eligibility criteria for participation in the Tender:

- A) The Bids shall be submitted by only the OEM (Original Equipment Manufacturer) or authorized sales and service provider of OEM in case OEM is not participating. Declaration from OEM specific to this tender in this regard needs to be submitted.
- B) The quoted chiller should be compatible with the above mentioned diffractometer.
- C) The tenderer must take the responsibility for the delivery, installation and commissioning of the product at the site specified during the order process and at time specified during the order process. Delay in installation and /or commissioning will be subject to penalize.
- D) Manufacturer should be ISO 9001:2008 Certified.
- E) Manufacturer should have factory and R&D in India. Manufacturer is required to provide the full details of factory address in India.
- F) The Bidder shall be an established manufacturing company for chillers and related equipment registered under the Companies Act, 1956 having operations in India for the last three years as on 31.12.2014 (Certificate of Incorporation) and shall have their registered offices in West Bengal and submit valid documentary proof of
 - Certificate of incorporation
 - Trade License of West Bengal
- G) The Bidder should have delivered and installed at least two similar equipments to support high value sophisticated scientific instruments at reputed research institutions/Universities in India
- H) The manufacturer should have WB sales tax registration for more than 5 years with same company name. A copy of the certificate should be enclosed with the offer.

2) Technical specifications:

The details of the technical specifications for the water chiller with 5 TR capacity is given in Annexure-A.

ANNEXURE-A

Technical specification for 5 TR water chiller

Application details	
Nominal Cooling Capacity	15000 Kcal/Hr~5 TR @20 ⁰ C water outlet temperature
Temperature stability	± 2 ⁰ C or better
Rated media temperature	15-30 ⁰ C
Cooling Media	Clean soft water
Min and Max operating ambient temperature at site	10-45 ⁰ C
Rated flow rate	20-40 LPM or better @ 5 bar at chiller outlet
End Connection	1/2" BSP
Required power supply for chiller	3 Phase, 415 V, 50 Hz and Earthing
Allowable Voltage variation	± 10%
Power and Current at full load	4.5 KW, 10 Amps
Control Voltage	1 Phase, 230 V, 50 Hz
Safety Interlocks	HP trip, LP trip, Single phase preventer trip, low water level trip, Motor over load trip should be provided Water flow switch at Chiller inlet, with cut off option if no flow into chiller, should be provided Low and high temperature alarm should be provided
Refrigeration	
Refrigerant	R134a /R407C
Refrigeration circuits	One scroll compressor
Condenser	Air cooled condenser with internally grooved copper tubing, Aluminium fins, with heavy duty exhaust fans
f8Chiller	Chiller internal piping should be non corrosive, anti scalling
Expansion device	Thermostatic expansion valve
Filter drier	Silica gel type filter drier should be provided
Electrical	
Controller	Microprocessor based temperature controller
Switches	High and low pressure switch should be provided MPCB, Contactor, main switch should be provided LED indicators, float switch should be provided
Environment standards and protection class	As per IP55 norm
Water	
Water reservoir	SS non corrosive water reservoir.
Pump/motor	SS304 impeller centrifugal pump coupled with motor
Bye pass line	Bypass line with a Gate valve at pump discharge line to regulate the pressure from 2 bar to 5 bar
Ion removal	The chiller must have internal Ion removal cartridge
Inlet filter	The chiller must have inlet particle filter of 8 micron size
Port	Drain port with control valve should be provided Top up port, Overflow port should be provided
Pressure gauge	Pressure gauge, level indicator should be provided
Structure	
The quoted chiller should be treated and powder coated to standard color	
Should be compatible for use in a clean dust free environment	
Important	
The Technical Specification along with Credentials & Eligibility should be certified and verified as per the tender notice.	