

NOTICE INVITING QUOTATION

NIQ No.: ITD/PHYSICS/2011-12/SJC/CHLR

DUE DATE: 10-02-2012

Sealed quotations along with **complete details (brochures/web-site details)** are invited for procuring a **Water Chiller (Qty. – 1) for X-ray Diffractometer with 12 kW rotating anode** as per following desired specifications.

Item : Closed loop chilled water-circulating plant (Quantity. -1)

S.No.	Parameter	Specification
1	Cooling Capacity	≥ 15000 kcal/hr at +15°C
2	Water Circulating Pressure	≥ 5 bar
3	Water Flow Rate	≥ 60 LPM
4	Water Temperature: (a) Operating Range (b) Required temperature (c) Ambient temperature	+15°C to +20°C +15°C + 45°C
5	(a) End Connections for water inlet/outlet (b) Additional manifold fitted with GATE valve (Two Pcs.)	1” for GI/flexible pipe connection (inlet/outlet, fitted with GATE valves at inlet and outlet) 1” (1 inlet with 1 GATE valves) to ½” (5 outlets with 5 GATE valves)
6	Power Supply	3Ø, 380/400 VAC 50Hz 15 Amp
7	Tank Capacity and Material	200 Liters SS, TIG Welding with polynitrile rubber insulation
8	Construction of Frame & Tank: (a) Frame Material: (b) Tank Material:	MS angle frame; MS panels duly Powder coated. SS 302 or better sheet, duly polished with full opening cover with puff insulated
9	Refrigeration/Compressor/Control System (a) Compressor (b) FAN (c) Evaporator (d) Filter drier (e) Expansion Valve (f) Antifreeze Thermostat (g) HP/LP Switch (h) MCB/Contactor/Rotary switch/indicators	DX Type cooling coil with Danfoss/Emerson make compressor with air-cool condenser Axial Flow type heavy duty CE compliance/ EVM/COMBO make Fan/Motor (specify the make). CBE type (GEA/KAORI/SWEP make) Danfoss/Sporlon/Alco Danfoss/Sporlon/Alco Sub-zero Danfoss/Sporlon/Alco All Telemecanique make

	(i) Wiring (j) Fuses	Lapp Cable/Finolex make <i>Supply 5 sets of spare fuses</i>
10	Refrigerant	R - 407C
11	Water Pump	Centrifugal Vertical Multistage type water circulating SS pump (Grundfos/Ebara make) with strainer and pressure regulating valve and gauge)
12	Temp Controller	Carel /Dixell make
13	Safety with interlocks	<ul style="list-style-type: none"> • High 30^o temp and Low 10^o Temperature cut with microprocessor control. • High and Low Refrigerant pressure cut. • Water low-level Alarm, and Trip. • Single Phasing and Reverse Phasing cut. • Over load cut. • Antifreeze Thermostat trip feature
14	Accuracy of Temperature	Less than or equal to $\pm 1^{\circ}\text{C}$
15	Overall Chiller's SIZE/dimension	Chiller should be compact, so as to move through an entrance door of size: Breadth < 38" & Height < 80" . The length should be less than 84" .
16.	Noise (sound) level at 1m distance	≤ 70 dB. Satisfactory demonstration of noise level at the time of commissioning will be the criteria for release of payment.
17	Warranty	THREE years from the date of installation.
18.	<p>(a) The chiller will be used exclusively for 12kW rotating X-ray source based X-ray diffractometer. Quotations will be accepted and considered from those vendors who have in past supplied and successfully installed water-chiller for similar X-ray diffractometers.</p> <p>(b) Vendor must submit the list of institutions/industry/laboratory along with the contact tel. no./e-mail of the concerned customers as in (a).</p> <p>(c) The vendor should submit/supply the detailed Wiring/Block diagram together with Operating manual</p> <p>(d) The initial charge of refrigerant /oil should be provided by the vendor</p> <p>(e) The installation and successful commissioning at our site be demonstrated. Necessary installation charges, if any, must be clearly indicated in the offer.</p> <p>(f) All electrical wiring should be in the scope of the work. We shall arrange the 3 phase Power outlet.</p>	

TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS

1. **Delivery** The rates quoted must include all taxes/charges including freight/insurance etc. till IITD Delhi.
2. **Payment Terms** The payment terms should be clearly indicated in the offer.
3. **Validity of quotations** Quotations will be considered **valid for 3 months** from the date of receipt unless otherwise stated.
4. **Correspondence** No correspondence regarding acceptance/rejection of a quotation will be

- entertained.
- 5. Submission of quotations** Quotations should be sent in a sealed cover marked at the top with our **N.I.Q. REFERENCE AND DUE DATE FOR OPENING** as otherwise it will not be considered.
- 6. Discount/ rebates** Special discount/rebate wherever admissible keeping in view that the supplies are being made for Educational purpose in respect of Public Institution of National importance may please be indicated.
- 7. Warranty & delivery period** **Necessary information must be provided in respect of**
(a) Warranty (**3 years**) and
(b) Delivery period
- 8. Other**
1. Quotations will be entertained from OEM. A letter to this effect from OEM stating clearly that the quoted Water Chiller is manufactured by them and necessary after sales service will be provided by them till next 5 years.
 2. The **printed brochures and website link detailing the technical specifications of the items quoted MUST be provided** in the offer, **failing which the offer shall not be considered.**
- 9. Rejection** Quotations not conforming to above terms and conditions (Item no 1-8 above and including S.No. 18 in Table above) will be rejected.
- 10. Institute's rights** Institute reserves the rights of acceptance or rejection of any or all quotations without assigning any reason(s). The discretion for increasing or decreasing of the quantities demanded also vests with the Institute.

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