

# INDIAN INSTITUTE OF TECHNOLOGY GOA

At Goa Engineering College Campus

Farmagudi, Ponda, Goa 403401

E-mail: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)

GSTIN: 30AABAI1653D1ZF

PAN: AABAI1653D

TAN: BLRI08261B

**Enquiry No: IITGOA/2020-21/013**

**Date: 28/10/2020**

IIT Goa invites sealed quotations in two bid form for the supply of below mentioned item.

Sl. No.	Description of Item	Qty
1	Kugelrohr Apparatus (Detailed specifications attached)	01 No.

## Terms & Conditions

1. Quotation must be valid for at least 90 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Kindly attach a compliance certificate along with the technical quote.
4. Prices: Prices should be quoted in INR – F.O.R., IIT Goa basis only.
5. Payment terms: Within 30 days after the delivery and successful installation of item at IIT Goa.
6. Delivery and installation should be made within 6 weeks of getting a confirmed order.
7. Supplier should provide minimum one-year warranty for the above stated items.
8. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
9. The successful bidder has to submit a Performance Guarantee Bond for 5% of the Purchase Order value and valid till one year plus 60 days OR up-to warranty period whichever is later from the date of issue of Purchase Order. Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of order acknowledgment as a successful bidder.
10. Quotations shall be submitted in two parts;  
**Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates (if applicable), any other certificates/details etc. This envelope should be marked as “Technical Bid”  
**Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
11. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason in public interest.

12. For any clarification, you may kindly contact Dr. Raja Mitra (E-mail: [rajamitra@iitgoa.ac.in](mailto:rajamitra@iitgoa.ac.in) )and Stores & Purchase Department (email: [purchase@iitgoa.ac.in](mailto:purchase@iitgoa.ac.in)) till 13/11/2020.
13. All sealed quotations must be super scribed with the tender enquiry number and should reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa, 403 401 by 17.00 Hrs on or before 18/11/2020.

**Sd/-**  
**Asst. Registrar (S&P)**

## TECHNICAL SPECIFICATION FOR KUGELROHR

### Specifications:

**1) Kugelrohr (1 No) with a vacuum pump (1 no) and automatic vacuum controller (1 no):**

S. No.	Specification	Complied (Yes/No)	Comments
1.	Kugelrohr should be able to do short path distillation of semi-micro volumes		
2.	Rotation speed up to 50 rpm with microprocessor control.		
3.	All glass components should be made of Borosilicate.		
4.	Rotational Ball tubes for 10 ml (4 pcs) along with vapour duct and clips		
5.	Rotational Ball tubes for 20 ml (3 pcs) along with vapour duct and clips		
6.	Rotational Ball tubes for 30 ml (3 pcs) along with vapour duct and clips		
7.	Rotational Ball tubes for 40 ml (2 pcs) along with vapour duct and clips		
8.	Sample area should be transparent & easily visible		
9.	a) Temperature and time programmer at 3 levels. b) Temperature regulation range 40 to 300 °C. c) Heating temperature through the electrically conductive coating on the glass. d) Temperature precision $\pm 5$ °C e) Warm-up time from RT to 300 °C within 10 min.		
10	Cooling units must be supplied for distillation.		
11.	Control unit with large 4.3 inches LCD display for centrally controlling all process parameters.		
12.	Manual management of pressure settings and aeration with timer function		
13.	Integrated aeration valve and precision pressure sensor must be present.		
14.	Automatic aeration when pressure is above 1400 mbar.		
15.	Should have integrated solvent database for setting up dynamic distillation conditions.		

16.	Measuring range: 1400 - 0 mbar; Control range: ambient to 0 mbar.		
17.	Woulff bottle included		
18.	Oil free vacuum pump with a flow rate of 1.5 m <sup>3</sup> /h.		
19.	Ultimate vacuum should be 10 mbar or better.		
20.	Chemically resistant diaphragm made of PTFE.		
21.	Sound Level adjustable between 32-57 dBA.		
22.	Should be supplied with a silencer.		
23.	Should be supplied with secondary condenser and glass flask, adjustable clips.		
24.	Should be speed-controlled pump and stops after reaching desired vacuum pressure.		
25.	All tubing, connection and spares for pump		
26.	Kugelrohr setup must be upgradable to sublimation, freeze-drying		
27.	Grease for the glass joint must be supplied		
28.	Communication cable must be supplied		
<b>Optional accessories (must be quoted)</b>			
29.	Drying set up which can be used along with the Kugelrohr		
30.	Sublimation set up which can be used along with the Kugelrohr		
31.	AMC for another 2 years after the warranty period		
32.	All spares (like gaskets, O-rings, hose barbs etc) parts must be quoted		

**Note-**

1. All components like Kugelrohr, Vacuum Pump, and Controller should be from the same Manufacturer/Company.
2. Company/Vendor should have local service support and service engineer must attend the complaint within 48 hours.
3. Warranty of Kugelrohr system should be **1 Year** from the date of installation.
4. One-day training at IIT Goa.
5. All items must be approved by CE/CSA
6. The quoted model must be supplied to other IITs, IISc and IISERs.
7. User list of 10 recent installations.

**FORMAT FOR PERFORMANCE GUARANTEE BOND**

**(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred)** (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT GOA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT GOA OR ANY SCHEDULED BANK SITUATED AT GOA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To,  
The Registrar,  
Indian Institute of Technology, Goa  
Farmagudi, Ponda,  
Goa – 403401

**LETTER OF GUARANTEE**

WHEREAS Indian Institute of Technology, Goa (Buyer) have invited Tenders vide Tender No..... Dt. .... for purchase of .....

AND

WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**Registrar, Indian Institute of Technology, Goa**” in the form of Bank Guarantee for Rs ..... (**5% (five percent) of the purchase value**) and valid till **one year or upto warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology, Goa on demand and without protest or demur Rs..... (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology, Goa (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, ..... (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Technology, Goa (Buyer).

**Notwithstanding anything contained herein:**

1. Our liability under this Bank Guarantee shall not exceed Rs. .... (Indian Rupees ..... only).
2. This Bank Guarantee shall be valid up to .....(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Goa serve upon us a written claim or demand on or before ..... (date).
4. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at ..... situated at ..... (Address of local branch).

Date:

Yours truly,

Signature and seal of the Guarantor:

Name of Bank:

**Instruction to Bank:** Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.