

 <p>IIT PALAKKAD</p>	<p>भारतीय प्रौद्योगिकी संस्थान पालक्काड Indian Institute of Technology Palakkad अहलिआ एकीकृत कैम्पस, कोज़िहपारा Ahalia Integrated Campus, Kozhipara पालक्काड- 678557 Palakkad – 678 557</p>	<p>दूरभाषसंख्या/ Phone no: 04923 – 226300/590/586</p> <p>ईमेल/ Email : purchase@iitpkd.ac.in</p>
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Ref No: IITPKD/ELE/AA/117/2017

Date: 02.02.2018

Due Date of the tender: 16.02.2018 @ 3.00 PM

TENDER FOR INVITING QUOTATIONS

Dear Sirs,

On Behalf of Indian Institute of Technology Palakkad quotations are invited for “**Fume Hoods for Central Fabrication Facility**” confirming to the specification in the Annexure.

- 1. Preparation of Bids:** - The tenders should be submitted **under two-bid system** (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in technical bid. Financial Bid should indicate item – wise prices for the items mentioned in the technical bid. The technical bid and the Financial should be put in separate cover and sealed. Both sealed covers should be put into a bigger cover
- 2.** The Quotations duly sealed and superscribed on the envelope **with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. Fax and Email quotation are not acceptable.**
- 3.** The price should be quoted per unit and packing and delivery charges should be indicated separately. The offer/bids should be exclusive of Taxes and Duties, which will be paid by the purchaser as applicable. However the percentage and of taxes and duties as on date should be clearly indicated.
- 4.** The Quotations should be valid for **sixty days** from the due date and the period of delivery required should also be clearly indicated.
- 5. Local Firms:** Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
- 6.** Firms outside Palakkad: Quotations should be for **F.O.R. at IIT Palakkad**. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
- 7.** Goods should be supplied carriage paid and insured. Goods shall not be supplied without an official supply order.

8. Custom Duty: Custom Duty which will be paid at a concessional rate against duty exemption certificate.

9. Goods and Service Tax : Concessional GST@ 5% will be paid extra as per GOI notification no. 47/2017, dated 14.11.2017.

10. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later. **Please indicate actual product cost + Taxes separately.** No advance payment will be made. The Tenderer have to furnish the bank details along with tender like Account No, Account Name, IFSC Code etc.,

11. Submission of Bids: Quotation should be sent to the following address “**The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557, Kerala**”, Phone No: 04923 226 300/ 590/586 , Email : purchase@iitpkd.ac.in

12. Delivery Period: The quotation should indicate clearly when delivery and installation will be made. In case there is any deviation in the delivery schedule, liquidated damages may be enforced or penalty for the delayed supply period may be levied.

13. Late offer: The quotation received after due date will not be considered. Please ensure that your offer is sent well in advance to reach the Institute by the due date.

14. Warranty: Warranty Clause should be indicated Clearly. For more details please refer our specification.

15. Acceptance and Rejection: I.I.T Palakkad has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully,

Encl: Specifications

Registrar, IIT Palakkad

Technical Specification for Fume Hoods and associated ducting

Overview :

IIT Palakkad requires two polypropylene, class-100 fume hoods for its Central Fabrication Facility located in the Transit Campus, IIT Palakkad (near GramaLakshmi Mudralaya).

Requirement :

1. Class 100 fume hood for acid/base use : Quantity 1 Number
2. Class 100 fume hood for solvent use : Quantity 1 Number
3. Exhaust blower (to be mounted on top of building) : Quantity 1 Number
4. FRP ducting : Quantity as required.

A. Common Specifications for both fume hoods :			
Sl. No.	Item	Specification	
1.	Dimension	Outer Dimension L:1520 mm x D: 1190 mm x H:2400 mm. (Upto +/- 10% deviation from the above size is acceptable)	
2.	Construction	(a) Material of construction is 10 mm thick (or greater) natural Polypropylene laminated sheets.	
		(b) Adjustable levelling feet.	
		(c) An operator safety visor made of 6 mm thick clear acrylic sheet with PP frame, which is fixed in front of the bench and can be opened/closed based on the operator's requirement.	
		(d) Polypropylene drain of size 50mm with union connection will be provided at bottom of the sink base for draining	
		(e) Polypropylene C-Channels will be incorporated for improving strength & rigidity of wet bench.	
		(f) All materials selected for application must be suitable for cleanroom application.	
3.	Fan Filter Unit	(a) Aim to provide Class 100 laminar air flow inside the fume hood. Air flow rate must be controllable between at-least 500-750 cfm.	
		(b) Fan and HEPA filter must be integrated as a module that meets CE certification. Proof of certification must be provided.	
		(c) Sound level must be lower than 57 dB measured at a distance of 800 mm from the filter face.	
		(d) HEPA Filter	i. High Quality HEPA filters must be used.
			ii. Must be rated at 99.99% efficiency in removing 0.3um or larger particles.
			iii. Filter media is micro-glass fibre with poly-string separator.
			iv. Filter guard must be provided.
		(e) Pre Filter	i. Must be rated at 90% efficiency in removing particles in the [10-15] um range
			ii. Pre filter must be made from non-woven material.
		(f) Fan	i. Material : Al Zinc Alloy

			ii. Fan motor will be direct drive with sealed bearing.
			iii. Fan motor will be rated for continuous operation, must support two speed operation and have thermal overload protection
			iv. Fan motor will run on 1-phase supply
4.	Exhaust port	(a) Exhaust grills shall be provided above and below the worktop. All fumes generated at the work area will be exhausted through the exhaust port	
		(b) Design should ensure that there is no turbulence at the exhaust port.	
5.	Lighting	(a) Two numbers of UV filtered lights, each of 36 W must be fit inside the fume hood.	
		(b) Material of construction : PVC / Polycarbonate	
6.	Nitrogen / Drying gun	(a) Two number of N2 spray gun made constructed of virgin PTFE material. Must resist attack by chemicals.	
		(b) Must have 1/4" FNPT Inlet thread, filter housing with disposable filter.	
		(c) Max. operating pressure 5 Bar.	
		(d) Temperature Range of medium: 10C - 50C	
7.	Magnehelic gauge	Magnehelic gauge of 50mm of water column capacity to measure the differential pressure at the exhaust plenum box in fume hood.	
8.	Electrical	Fume hood must have a dedicated miniature circuit breakers (MCB) on the input side.	
		A total of 6 nos. of 5/15A combi-socket with dedicated switches located on front of the station, three on either side.	
		Switches and plugs must be either Legrand, Northwest, MK	
9.	Bottom Storage Trolley	The station will be provided with 2 nos. of storage cabinet trollies for storing materials under the sink base.	
10.	Certifications	(a) The bidder must be an ISO 9001-2015 certified Company. Proof must be submitted.	
		(b) The bidder must possess SEFA 1-2010 and CE Conformity Markings for the fume hoods that are being quoted. Proof must be submitted.	
11.	Warranty	Service and warranty for a minimum period of three years for the equipment must be provided. AMC for additional three years must be quoted separately.	
B. Additional Specification for acid/base fumehood :			
1.	Worktop	(a) Worktop will be made of 10mm thick polypropylene sheet with perforation. Appropriate supporting ribs shall be given at the bottom of worktop to avoid deflection.	
		(b) Worktop spills, chemical spills and spent DI water will drain to the plenum below and from there to a dedicated main spigot to station rear.	
2.	Sink	(a) Polypropylene sink of size L:250 mm x W:250 mm x D:200	

		mm must be fit in the worktop.
		(b) One Gooseneck made of polypropylene with control valve must be positioned near the sink.
3.	Waste-chemical collection	(a) Two dedicated polypropylene sinks (one for acidic and one for basic chemicals), each of size 150 mm x 150 mm x 150 mm.
		(b) Each sink must drain into dedicated collection tank of min 5 litre capacity.

C. Additional Specification for solvent fumehood :		
1.	Worktop	(a) Worktop will be made of (at least) 1.6mm thick SS304 sheet with perforation. Appropriate supporting ribs shall be given at the bottom of worktop to avoid deflection.
		(b) Worktop spills, chemical spills and spent DI water will drain to the plenum below and from there to a dedicated main spigot to station rear.
2.	Sink	(a) SS304 sink (with sheet thickness at least 1.6mm) of size L:250 mm x W:250 mm x D:200 mm must be fit in the worktop.
		(b) One Gooseneck made of polypropylene with control valve must be positioned near the sink.
3.	Waste-chemical collection	(a) One dedicated SS304 sink (with sheet thickness at least 1.6mm) of size 150 mm x 150 mm x 150 mm.
		(b) Sink must drain into dedicated SS304 collection tank (with sheet thickness at least 1.6mm) of min 5 litre capacity.
D. Specifications for Exhaust Ducting and Blower		
1.	Exhaust Blower	(a) Single Inlet Single Width (SISW)FRP Centrifugal Blower @ 1600 CFM @ 120 mm aq.
		(b) 3 ph totally enclosed fan cooled motor with all standard accessories & mountings (including but not limited to mounting stand, blower outlet, bird cowl and rain protection)
2.	FRP Ducting	(a) 5 mm thick (3mm PP + 2 mm FRP) 250 mm dia. duct 20 meters will be have to supplied with all required fittings.
		(b) PVC 200 mm dia. duct 20 meters be have to supplied with all required fittings.
E. Installation, Testing, Commissioning & validation		
Charges for Packing, transportation, installation of ducting and fume hoods, exhaust installation and ducting, electrical connections and wiring all lie within the scope of the bidder.		

Who can participate in the bid?

Only those bidders fulfilling the following criteria should respond to the tender.

1. The bidder should be either an Original Equipment Manufacturer (OEM) of Polypropylene Fume Hoods or should be an authorized representative (provide documentary proof) of an OEM.
2. The bidder should be a company registered under the Companies Act, 1956/2013 OR a Limited Liability Partnership /a registered partnership firm OR a sole-proprietorship entity. Appropriate Registration incorporation certificate must be submitted.
3. The bidder must have a registered office in Karnataka/TamilNadu/Telangana/Andhra Pradesh/Maharashtra or Kerala. Certificate of registration for the offices to be provided.
4. The bidder must also have a service center in Karnataka/Tamil Nadu/ Telangana/Andhra Pradesh or Kerala. Certificate of registration for the centers to be provided. Details about scope of service activities provided by the service centres must be provided. The contact details of the service engineers must be provided.
5. The bidder must be in existence in the business of Polypropylene Fume Hoods for a minimum period of 5 previous financial years (before or since 01 April 2012). Documentary evidences of experience must be provided.
6. The bidder should have implemented orders of Polypropylene Fume Hoods worth exceeding INR **3 Lakh** during previous three financial years (01 April 2014 – 31 March 2017). Copies of the most recent purchase orders and certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished.
7. The bidder should have documentary evidence of having supplied at least 10 Numbers. of Polypropylene Fume Hoods to clean-room facilities run in Centrally Funded Technical Institution (e.g., IIT, NIT, IISc, IISER, etc.) in the recent past. The bidder must provide a certificate of satisfactory performance of the supplied equipment from the institute to which they have recently supplied. Contact details of the faculty-in-charge of the installed setup must also be provided.
8. The bidder must provide detailed specification of each equipment/item. Model numbers, data sheets and brochures must be included for each quoted equipment/accessories/item. Specifications corresponding to quoted model number must be available publicly via OEM's website for scrutiny. If not, bid can be disqualified on technical grounds.
9. The purchase committee at IIT Palakkad reserves the right to ask for photographs/CAD drawings/flow diagrams of sub-assemblies to satisfy themselves of the proven capabilities of the bidder in manufacturing systems similar to the one that is being specified here. The bidder must provide these details within two working days of receiving such a request via email. Decision regarding technical compliance of the bidder can be taken on the basis of these photographs/CAD drawings/flow diagrams.
- 10. Compliance sheet for the technical specification and OEM Brochure have to be attached along with the Technical bid. Vendor has to fill the compliance sheet and mention page number or reference number in OEM brochure. Unfilled / partially filled sheets lead to disqualification.**
- 11. Service and warranty for a minimum period of three years for the equipment must be provided. AMC for additional three years must be quoted separately.**