

	<p>भारतीय प्रौद्योगिकी संस्थान पालक्काड  <b>Indian Institute of Technology Palakkad</b>  अहलिआएकीकृतकैम्पस, कोज़िपारा  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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**Tender No: IITPKD/CSE/028/2017**

**Date: 12.09.2017**

**NOTICE FOR INVITING QUOTATIONS**

**DUE DATE FOR SUBMISSION OF QUOTATION 22.09.2017 AT 15.00 HRS**

Dear Sirs,

On Behalf of Indian Institute of Technology Palakkad sealed item rate quotations are invited from **“Original Equipment Manufacturer for “Supply, installation, testing and commissioning (SITC) of 11 TR duct able split ACs to New Computer Lab (Room No. 126) at IIT Palakkad” conform** to the specification in the Annexure.

1. Quotations are invited for the various items shown below/overleaf/ enclosed list.
2. The Quotations duly sealed and super-scribed on the envelope with the name of work reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated
4. 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.
5. **Warranty: Three years warranty from the date of acceptance and taking over of installation should be indicated clearly.**
6. **Delivery Period: Within 7 Days from the date of issue of work order. Time allowed for execution shall be 10 days from the date of issue of work order.** In case there is any deviation in the delivery schedule, liquidated damages at the rate of 1% per week on quoted amount will be enforced.
7. The sealed quotation may be sent to the “The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557. The quotation sent by fax and e-mail will not be accepted.
8. Acceptance and Rejection: I.I.T Palakkad has the right to accept the whole or anyparts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

### **Terms & Conditions:**

1. The indoor units shall be ceiling suspended type. The indoor unit should be placed in the corridor outside the shown in the room layout.
2. The indoor unit shall comprise of Fan, copper Cooling Coil, Filter and Expansion device.
3. The Outdoor unit shall comprise of Hermetic scroll compressors. Air cooled copper condenser & Condenser fan. If multiple compressors are offered, they shall have independent refrigerant circuits.
4. Also, Compressors shall be cut-off automatically under part load conditions
5. The units shall have microprocessor controls & flurr nuts in the outdoor units
6. Scope shall include all supports for the indoor and outdoor units. The units shall be selected for Palakkad Ambient Conditions as specified. The units shall be factory assembled and only the refrigerant piping carried out at site. The tenderer shall submit the phamlet of the model/make of the unit / Operation manual along with tender.
7. Water tripping should be avoided at all cost during and after installation.
8. The successful tenderer will have to arrange all the tools & ladder conveyance for the work and except civil works such as closing of the holes for refrigerant pipes/drain pipes with cement plastering.
9. Payment terms :
  - I. 75% Payment against delivery in good condition without defect/damage at site and inspection.
  - II. 20% payment on commissioning and completion of successful running period
  - III. Balance 5% payment will be released on completion and submission of seasonal test report.
10. The design of AC system should be submitted for approval indicate flow velocity, friction, mass phase velocity, mass outlet in velocity , flow velocity etc.
11. The Split AC shall be almost (low db level) silent operation.
12. The work shall be executed as per latest CPWD Specifications for Electrical/HVAC.

## Name of work: SITC of 11 TR ductable split AC for New Computer Lab (Room no 126) at IIT Palakkad

Sl.no.	Description	Quantity	Unit	Rate	Amount
	SH: 1 SUPPLY AND INSTALLATION				
1.1	Supply, installation, testing and commissioning (SITC) of 11 TR capacity air cooled Ductable split with scroll compressor, Ceiling Suspended Indoor Units (IDU) and all standard fittings, IDU SS drain pan, as per specifications complete with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, R 407c of equivalent refrigerant gas, vibration isolator pads, condenser stand and safety devices like thermal protector, pressure relief valve, over load relays, single phase preventer, high-low pressure cut out, suitable for three phase 440V supply. (Blue Star/Hitachi/Carrier/Voltas)	1	nos		
1.2	Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 11 TR machine with 13mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for ductable split units as per site conditions	15	mtr		
1.3	Supply, laying, termination, testing and commissioning of PVC insulated PVC sheathed steel armoured copper 1100V grade power/control cable as required.				
1.3.1	4C X 6 Sqmm	20	mtr		
1.3.2	6C X 1.5 Sqmm	15	mtr		
1.4	Supply, installation, testing and commissioning of PVC drain pipe of 25mm dia ISI marked, connecting the drain lines from the indoor units to floor sump, with 9mm nitrile rubber insulation as per specification	1	job		
	SH: 2 AIR DISTRIBUTION	10	mtr		
2.1	Sheet Metal work using factory made 120GSM corrugated to be considered to increase the rigidity of the ducting by 300 %, circular ducting with duct fittings like elbow, reducers, end cap, offset, collars, veins. Thickness of the corrugated circular duct should be as per SMACNA standard. Rate includes all mobilization of material from manufacturer point to delivery point at IIT Palakkad.				
	CORRUGATED ROUND DUCTING				
2.1.1	24G – 450mm dia	4	mtr		
2.1.2	22G – 600mm dia	6	mtr		
2.2	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal ducts rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter, dampers, vanes, hangers, supports, etc as per approved drawings & specification of following sheet thickness				
2.2.1	22 g ducting	5	sqmtr		
2.3	Supply & fixing of Acoustic insulation for supply air duct using 9mm thick class of rating open cell nitrile rubber elastomeric insulation with density of 140 – 180 kg/m <sup>3</sup> . The insulation manufactured as per BS 476 part 7 & which should also meet UL 94 test supplementary materials for air distribution system which should not absorb less 0.2% water by volume (ASTM c 209), should not support microbial growth (ASTM c 2180, G21, G22) and should not emit objectionable odors (ASTM c 665) and should have thermal conductivity of 0.04 W/m K @ 20 degC as per DIN EN 12667 and water vapour permeance of 0.10. Adhesive shall be used additionally with VOC level not exceeding 50 grms/ Litre (Armaflex/K Flex or equivalent)	14	sqmtr		

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2.4	Supply, fabrication, installation, testing of flexible connections made out of fire resistant flexible double canvas sleeve.	1	job		
2.5	Supplying, fixing testing and commissioning of supply air liner grill of powder coated aluminium with aluminium volume control dampers with 30 deg deflection.	2	sqmtr		
2.6	Supplying, fixing testing and commissioning of return air grill of powder coated aluminium without aluminium volume control dampers with 15 deg deflection	2	sqmtr		
2.7	Supply and fixing of panels for making boxing for RA boxing. The boxing shall be made out of isowal panels of 50 mm thick expanded polystyrene, TF quality. Both sides of the panel shall be laminated with 0.50 mm thick galvanized steel sheet coated with polystyrene paint with strippele polythese sheet. Boxing work shall be executed at site as modular unit making use of pre fabricated factory fixing arrangement.	15	sqmtr		
2.8	Supply and fixing of fresh air dampers with 20 micron filters, cowl as rainwater protection and bird mesh.	1	job		
<b>Total</b>					

# Layout 2

