NIT No.: IITH/CMD/ELE/NIT/2024-25/21



NOTICE INVITING TENDER (NIT)

Name of work: Supply, Installation, Testing and Commissioning (SITC) of 9.5 TR Precision Air-Conditioning (PAC) System along with associated Electrical works of Data Center and Dismantling of the existing old PAC units with buy back option at Ground Floor, Chemical Engineering (Academic Block-A) Block, IIT Hyderabad, Kandi.

22.01.2025

Executive Engineer - Electrical IIT Hyderabad

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD

NOTICE INVITING TENDER

NIT No. IITH/CMD/ELE/NIT/2024-25/21

The Indian Institute of Technology(IIT) Hyderabad invites on behalf of President of India online bids (e-tenders) in Item rate / Percentage rate in Two-bid system (Technical Eligibility plus Financial) System, from the approved and eligible Electrical contractors of CPWD and those of appropriate list of M.E.S./BSNL/Railways/StateP.W.D./Central PSUs/State Govt. departments/Central Govt. Departments OR the Specialized Agencies authorized from the approved Original Equipment Manufacturer (OEM) for the following work as per the stipulated terms and conditions mentioned below.

Copy of valid Registration of Firm (ROF) certificate, PAN card, GST Registration certificate & GSTIN should accompany the Technical Bid and those certificates should be valid on the last date of submission of bid.

1.1	NIT No.:	IITH/CMD/ELE/NIT/2024-25/21
1.2	Name of Work:	Supply, Installation, Testing and Commissioning (SITC) of 9.5 TR Precision Air-Conditioning (PAC) System along with associated Electrical works of Data Center and Dismantling of the existing old PAC units with buy back option at Ground Floor, Chemical Engineering (Academic Block-A) Block, IIT Hyderabad, Kandi.
1.3	Estimated Cost: (given merely as a rough guide)	Rs. 39,77,045/- only
1.4	Earnest Money Deposit (EMD):	Rs. 79,600/- only
1.5	Period of Completion:	45 days
1.6	Date of Online Publication/Download of Tender	22/01/2025 @14:00hrs
1.7	Last Date for Submission of Bids	29/01/2025 @ 15:00hrs
1.8	Date and time of Opening of Technical Bids	30/01/2025 @15:30hrs
1.9	Date and time of Opening of Financial Bids	To be decided
1.10	Cost of Bid Document:	NIL
1.11	Website Link:	https://eprocure.gov.in/eprocure/app

Instructions to the Bidders for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, preparing their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal <u>(URL: https://eprocure.gov.in/eprocure/app)</u> by clicking on the link "Online bidder Enrollment" on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email addresses and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.,), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e- mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black-and white option which helps in reducing the size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates, etc.) has been provided to the bidders. Bidders can use the "My Space" or "Other Important Documents" are available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 5) Bidder should log into the site well in advance for bid submission.
- 6) ion so that they can upload the bid in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 7) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 8) The bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 9) The bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.

- 10) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 11) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc., The bidders should follow this time during bid submission.
- 12) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 13) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 14) Upon the successful and timely submission of bids (i.e., after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 15) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgment may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 16) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 17) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact details of the helpdesk are 0120-4711508, 0120-6277787, 0120-4001002, 0120- 4001005 and support-eproc@nic.in.

NOTICE INVITING TENDER <u>NIT No. IITH/CMD/ELE/NIT/2024-25/21</u>

Technical Eligibility Criteria:

1. Bidders shall produce definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:

Experience of having successfully completed similar works during the last 7 years ending last day of the month previous to the one in which tenders are invited.

Three similar completed works each costing not less Rs.15,90,818/-only or

Two similar completed works each costing not less than Rs.23,86,227/-only

or One similar completed work costing not less than Rs.31,81,636/-only

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of tender.

"Similar Work" shall mean the work of Supply, Installation, Testing and Commissioning (SITC) of Precision Air-conditioning (PACs)/Precision Air-Handling Units (PAHUs) systems and associated Electrical works in any Data Centre/Institutional campus/ Universities/ Labs/ Industries/Banks/IT Companies etc.

(For private works TDS certificate or Form-26 AS in support of value of work done.)

- 2. Turnover: The Average annual financial turnover of the bidder should be at least *Rs.11,93,114/- only* during the immediate last three(03) consecutive financial years ending 31st March 2024. The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at simple rate of 7% per annum. The certificate in this regard from the Charted Accountant shall be enclosed with the bid.
- 3. The bidder shall submit the Indemnity bond as per the format provided in Annexure-II
- 4. The bidder shall submit the authorization certificate from the Approved Original Equipment Manufacturer (OEM) of PAC System as per the format enclosed as Annexure- III.
- 5. To become eligible, the bidder shall have to furnish an affidavit as per Form 'J' of the NIT.
- 6. The bidder shall have Employees Provident Fund (EPF) enlistment and proof of the same shall be attached along with the Technical bid clearly showing the Provident Fund Code number.
- 7. Agreement shall be drawn with the successful tenderer on prescribed Form which is available in the website: <u>https://drive.google.com/file/d/19 LkFZ1leQb 3BznXQtinslcLISYVdbo/view</u> (with up to date correction slips if any) Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

8. The time allowed for carrying out the work will be as stated at para 1 from the date of start as defined in Schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.

9. The site for the work is available.

- 10. Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen for information at the above-mentioned website.
- 11. Applicants are advised to keep visiting the above-mentioned website from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respects including updates thereof, if any. An incomplete application may be liable for rejection.
- 12. The contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F'. including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
- 13. The description of the work is as follows:

Supply, Installation, Testing and Commissioning (SITC) of 9.5 TR Precision Air-Conditioning (PAC) System along with associated Electrical works of Data Center and Dismantling of the existing old PAC units along with associated dismantling works with buy back option at Ground Floor, Chemical Engineering (Academic Block-A) Block, IIT Hyderabad, Kandi

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

- 14. Tenders with any condition including that of conditional rebates shall be rejected forthwith.
- 15. Cost of **Bid document cost** and **EMD** may also be remitted to Institute's account number as per bank particulars given below:

Name of the Account Holder : Indian Institute of Technology Hyderabad				
: 30412797764 (Current Account)				
: State Bank of India				
: IIT Kandi, IIT Hyderabad Campus,				
Kandi, Sangareddy, Telangana - 502284				
14182				
: SBIN0014182				
:502002528				
: SBININBB762				

- 16. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
- 17. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 18. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
- 19. The contractor shall not be permitted to tender for works if his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute.
- 20. No Engineer of gazette rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
- 21. The tender for the works shall remain open for acceptance for a period of Ninety (90) days from the date of opening of tenders/Sixty days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (strike out as the case may be) if any tenderer withdraws his tender

before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.

22. (A) All taxes, Labor Cess etc., as applicable shall be borne by the contractor himself. The contractor shall quote his rates considering all such taxes including <u>GST on works</u>. Any recovery towards GST is notified by the competent authority, the same shall be effected and no claim what so ever shall be entertained by IITH. The contractor shall quote his rates accordingly.

(B) 2% as TDS amount of GST amount payable on the bills will be deducted as per the Govt. of India, Ministry of Finance, Department of Revenue notification vide No.65/39/2018-DOR, dtd: 14-09-2018.

23. GST registration certificate of the state in which the work is to be taken up, if already obtained by the bidder.

If the bidder has not obtained GST registration in the state in which the work is to be taken up or as required by GST authorities, then in such a case the bidder shall scan and upload following under taking along with other bid documents.

"If the work awarded to me, I/We shall obtain GST registration certificate of the state, in which work is to be taken up, within one month from the date of receipt of award letter or before release of any payment by IIT Hyderabad, whichever earlier, failing which I/We shall responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by IIT Hyderabad or GST department in this regard."

- 24. This notice inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of :
 - a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
 - b) Standard Contract form (General Conditions of Contract) as posted in the website of the Institute. The bidder is deemed to have gone through and understood the Standard Contract Form and the General Conditions of Contract.

22.01.2025

Executive Engineer-Electrical IIT Hyderabad

(Signature of bidder)

AFFIDAVIT

I/we undertake and confirm that our firm/partnership firm has not been blacklisted by any state/Central Departments/PSUs/Autonomous bodies during the last 7 years of its operations. Further that, if such information comes to the notice of the department then I/we shall be debarred for bidding in IIT Hyderabad in future forever. Also, if such information comes to the notice of IIT Hyderabad on any day before date of start of work, the Engineer-in-charge shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee (Scanned copy of this notarized affidavit to be uploaded at the time of submission of bid)

NOTE: Affidavit to be furnished on a 'Non-Judicial' stamp paper worth Rs.100/-

Signature of Bidder(s) or an authorized Officer of the firm with stamp

Signature of Notary with seal

Checklist of documents to be submitted along with Technical Bid

Sl. No.	Doc Ref	Description of the Document	Enclosed Yes/No	Remarks
	Applicant shall submit the following documents for technical scrutiny			
1	Registration of Firm (ROF)	Copy of valid Registration of Firm (ROF)		
2	PAN details	Copy of PAN card		
3	GST registration details	Copy of GST Registration certificate & GSTIN should accompany the Technical Bid		
4	Details of similar woks executed (Detailed statements to be enclosed)	Not less than Rs. 15,90,818/- only ofestimated cost (Three similar works) Not less than Rs. 23,86,227/- only of estimated cost (Two similar works)		
		Not less than Rs. 31,81,636/- only of estimated cost (One Similar work)		
5	As per Para No. 1.4 of NIT	Cost of EMD Rs. 79,600/- only.		
6	As per Sl. No.2 of NIT	Average annual financial turnover on construction works should be at least Rs. 11,93,114/- only during the immediate last three consecutive financial years ending 31 st March 2024.		
7	As per Sl. No. 3 of NIT	The bidder shall submit the Indemnity bond as per the format provided in Annexure-II.		
8	As per Sl. No. 4 of NIT	The bidder shall submit the authorization certificate from the Original Equipment Manufacturer (OEM) of PAC System as per the format enclosed as Annexure- III.		

9	As per Sl. No. 5 of NIT	The bidder shall have to furnish an affidavit as per Form 'J' of the NIT.	
10	As per Sl. No. 6 of NIT	The bidder shall have Employees Provident Fund (EPF) enlistment and proof of the same shall be attached along with the technical bid clearly showing the Provident Fund Code number.	
11	As per Sl.No.23 of NIT	Undertaking for GST registration in the state in which the work is to be taken up	

PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities (Enclosed): Part A (Item Rate)

SCHEDULE 'B'

Schedule of materials to be issued to the contractor

Sl. No.	Description of item	Quantity	Rates in figure & words at which the material will be charged to the Contractor	Place of issue		
	NIL					

SCHEDULE 'C'

Tools and plants to be hired to the contractor

Sl. No.	Description	Hire Charges per day	Place of issue

SCHEDULE 'D'

Extra schedule for specific requirements/documents for the work, if any.

--- NIL ----

SCHEDULE 'E'

Reference to General Condition of Contract.: Posted in the website of the Institute.

Name of work	: Supply, Supply, Installation, Testing and Commis (SITC) of 9.5 TR Precision Air-Conditioning (PAC) along with associated Electrical works of Data Ce Dismantling of the existing old PAC units with bu option at Ground Floor, Chemical Engineering (A Block-A) Block, IIT Hyderabad, Kandi.	
Estimated cost of work	:	Rs. 39,77,045/-
Earnest money	:	Rs. 79,600/-
Performance Guarantee	:	5.0% of the accepted tendered value
Security Deposit	:	2.5% of the tendered value

SCHEDULE 'F'

GENERAL RULES AND DIRECTIONS:

Officer inviting tender:		Executive Engineer-Electrical, IITH
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses12.2 & 12.3		1) Electrical & Mechanical works100%
Definitions:		
2(v) Engineer -in- Charge	:	Executive Engineer-Electrical, IndianInstitute of Technology, Hyderabad.
2(viii) Accepting Authority	:	Executive Engineer-Electrical, IndianInstitute of Technology, Hyderabad.
2(x) Percentage on cost materials and Labour to cover all overheads and profit	:	15% (Fifteen) per cent.
2(xi) Standard Schedule of Rate	:	CPWD, Delhi Schedule of Rates (DSR) 2022 E &M, with up to date correction slips.
Standard Contract Form		IITH General Conditions of Contract for Works
<u>Clause 1</u>		
i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance, in days		07 (Seven) Days
ii)Maximum allowable extension beyond the period provided in (i) above		7 (Seven) Days with late fee
<u>Clause 1A</u> Whether Clause 1A is applicable	:	Yes
Clause 2 Authority for fixing Compensation under Clause 2		Executive Engineer - Electrical, Indian Institute of Technology, Hyderabad

Clause 3(VII): If the contractor had secured the contract with Government as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement-will be made ineligible.

<u>Clause 5:</u>

Number of days from the date of issue of letter of acceptance for reckoning date of start	:	07 Days from the date of issue of LOA or handing over of site, whichever is later
Milestones	:	Not Applicable
Time allowed for execution of work	:	45 Days
Authority to give fair and reasonable Extension of time for completion of work (Web based hindrance register)	:	Superintending Engineer, IITH
Rescheduling of mile stones	:	Superintending Engineer, IITH
<u>Clause 6</u> :- Measurement Book Clause applicable, 6	:	(i) For works having estimated cost more than Rs 15 Lakh – Clause 6
		(ii) For works having estimated cost Rs. 15 Lakh or less – Contractor's option of Clause 6 or to be exercised at the time of Tender Submission
Clause 7:		
Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	:	NA
<u>Clause 7A:</u> Whether Clause 7A is applicable	:	NA. No running account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer- in-charge.
Clause 10A:		
List of testing equipment to be provided by the contractor at site lab	:	As given in additional specifications
<u>Clause 10B</u> (i)- Secured advance on Materials:		
Whether Clause 10 B (i) shall be applicable	:	NA
<u>Clause 10C:</u>		
Component of labour expressed as percent of : value of work	NA	

<u>Clause 10CA</u>	:	Not Applicable
<u>Clause 10CC</u>	:	Not Applicable
Clause 10D	:	Applicable
Clause 11: Specification to be followed for execution of work Clause 12:	:	For ELECTRICAL & VRV AC WORKS CPWD General Specifications for Electrical works: Part I Internal 2013 Part II External 1994 up to date Corrections Slips. CPWD General Specifications for HVAC works 2024 with upto date correction slips OEM Specifications and Guidelines. NIT Particular specifications
 12.2 & 12.3: Deviation limit beyond which Clause 12.2 &12.3 shall apply for building work 12.5 : Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work 	:	100% (One hundred per cent) 100% (One hundred per cent)
Clause 14: Whether Clause 14 is applicable	:	Yes.
Clause 16 Competent Authority for deciding reduced rates.	:	Superintending Engineer, IIT Hyderabad up to 5% of tendered amount, beyond which, Director, IITH.
Clause 18: List of mandatory machinery, tools & plants to be deployed by the contractor at site	:	As required for the work.
Clause 25: Settlement of disputes by Conciliation and Arbitration:		
Conciliator Authority to appoint arbitrator Place of arbitration Venue of arbitration Type of Arbitration Tribunal	: : : :	Dean (Planning) Director, IIT Hyderabad Hyderabad IIT Hyderabad Sole Arbitrator

Note: Provisions of Arbitration and Conciliation Act 1996 with latest amendments in force shall be applicable.

<u>Clause 32</u>: As required for the work.

Clause 38

: NA

(i): Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates

(ii) : Variations permissible on theoretical quantities:

- (a) Cement
- *(b)* Bitumen All Works
- (c) Steel Reinforcement and structural steel sections for each diameter, section and category

: DSR – 2021 Civil published by CPWD

2% plus/minus

2.5% plus only & nil on minus side.

2% plus/minus

Special Conditions of Contract

- 1. Before tendering, the Agency shall inspect the site of work and shall fully acquaint himself about the conditions prevailing at site, availability of materials, avail- ability of land and suitable location for construction of godowns, stores and camp, transport facilities, the extent of lead and lifts involved in the work (over the entire duration of contract) including local conditions, as required for satisfactory execution of the work and nothing extra whatsoever shall be paid on thisaccount.
- 2. The Agency shall at his own expense and risk arrange land for accommodation of labour, setting up of office, the storage of materials, erection of temporary work- shops, and construction of approach roads to the site of the work including land required for carrying out of all jobs connected with the completion of the work. In any case. IIT Hyderabad (Institute) shall not permit setting up of labour camps within its premises. If during construction it becomes necessary to remove or shift the stored materials shed workshop, access roads, etc. to facilitate execution of any other work by any other agency, the contractor shall do as directed by the Engineer-in-charge and no claim whatsoever, shall be entertained on this account.
- 3. It shall be deemed that the contractor shall have satisfied himself as to the nature and location of the work, transport facilities, availability of land for setting up of camp etc. The department will bear no responsibility for lack of such knowledge and the consequences thereof.
- 4. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer-in-charge. Nothing extra shall be paid on this account.
- 5. The contractor shall at his own cost submit samples of all materials sufficiently in advance and obtain approval of the Engineer-in-charge. Subsequently, the materials to be used in the actual execution of the work shall strictly conform to the quality of samples approved by the Engineer- in-charge and nothing extra shall be paid on this account. The acceptance of any sample or material on inspection shall not be a bar to its subsequent rejection, if found defective.
- 6. The contractor shall at his cost, make all arrangements and shall provide necessary facilities as the Engineer-in-charge may require for collecting, preparing, packing forwarding and transportation of the required number of samples for tests for analysis at such time and to such places as directed by the Engineer-in-charge, and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The cost of tests shall be borne by the contractor/Institute in the manner indicated below (except for water):
 - a) By the contractor, if the results show that the material does not conform to relevant specifications and BIS codes or any other relevant code for which conformity test is carried out.
 - b) By the Institute, if the results show that the material conforms to relevant specifications and BIS codes or any other relevant code for which conformity test is carried out.
- 7. Materials used on work without prior inspection and testing (where testing is necessary) and without approval of Engineer-in-charge are liable to be considered unauthorized, defective and not acceptable. The Engineer-in-charge shall have full powers to require removal of any or all of the materials brought to site by contractor which are not in accordance with the contract, Specifications or do not conform in character or quality to the samples approved by the Engineer-in-charge. In case

of default on the part of the contractor in removing rejected materials, the Engineer-in- charge shall be at liberty to have them removed at the risk and cost of the contractor.

- 8. The work shall be carried out in such a manner so as not to interfere/or effect or disturb other works being executed by other agencies, if any.
- 9. Any damages done by the contractor to any existing work or work being executed by other agencies shall be made good by him at his own cost.
- 10. The work shall be carried out in the manner complying in all respects with the requirement of relevant rules and regulations of the local bodies under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.
- 11. The contractor shall maintain in good condition all work executed till the completion of the entire work entrusted to the contractor under this contract and nothing extra shall be paid on this account.
- 12. No payment will be made to the contractor for damage caused by rain, floods and other natural calamities whatsoever during the execution of the works and any damage to the work on this account shall have to be made good by the contractor athis own cost and nothing whatsoever' shall be paid on this account.
- 13. The Item Rates or Percentage Rates for all items of work, unless clearly specified otherwise shall include the cost of all labour for materials, de-watering and other inputs involved in the execution of the items.
- 14. No claim whatsoever for idle labour, additional establishments, costs of hire and labour charges for tools and plants etc. would be entertained under any circumstances.
- 15. For the safety of all labour directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractors shall, in addition to the provisions of Safety code and directions of the Engineer-in-charge make all arrangements to provide facility as per the provisions of Indian Standard Specifications (Codes) listed below and nothing extra shall be paid on thisaccount.
- (a) IS 3696 Part I Safety Code for scaffolds and ladders
- (b) IS 3696 Part II Safety Code for scaffolds and ladders Part II ladders $% \mathcal{A} = \mathcal{A} = \mathcal{A}$
- (c) IS 764 Safety Code for excavation work
- (d) IS 4081 Safety Code for Blasting and Drilling operations,
- (e) IS4138 Safety Code for working in compressed air.
- (f) IS 7293 Safety Code for working with construction machinery
- (g) IS 7969 Safety Code for storage and handling of building materials
- (h) IS 5216:1982 code of safety procedures and practices in electrical works
- 16. The contractor shall take all precautions to avoid all accidents by exhibiting necessary caution boards and by providing red flags, red lights and barriers. The contractor shall be responsible for any accident at the site of work and consequences thereof.

- 17. The ESI and EPF Contribution on the part of the employer in respect of the contract shall be paid by the contractor.
- 18. The contractor shall obtain a valid licence under the contract labour (R A) Act, 1970 and the contract labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid licence until the completion of the work. The contractor shall also comply with provision of the Inter-State Migrant Women (Regulation of Employment and conditions of service) Act 1979.
- 19. All tools, tackles, safety equipment and labours required for maintenance and testing works / AMC at all levels and heights shall have to be provided by the tenderer at no extra cost.
- 20. Spare parts used by vendor should conform to IS specifications as applicable.
- 21. Any damaged due to mishandling by the person deputed by the vendor shall have to be restored back to its original condition by the vendor at their own cost.
- 22. The work shall be carried out strictly in conformity with the CPWD General Specification of Electrical Works Part-I (Internal) 2023, and Part-II (External) 2023 for electrical works in force and the Indian Electricity Rule 1956, as amended up to date.
- 23. The contractor shall produce the proof of purchase from manufactures/ authorized dealer for all materials used at site. In order to ensure the genuineness of equipment/ materials, copy of the invoice of each equipment/materials duly authenticated by a bidder shall be invariably produce to the engineer-in-charge as and when required.
- 24. The components of the installation shall be suitably designed so as to satisfactorily function under all conditions of operation.
- The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.
- All equipment and material to be used in work shall be manufactured in factories of good repute having excellent track record of quality manufacturing, performance and proper after sales service.
- All equipment and material to be used in work shall be brand new at site with manufacturer's certificates, warrantee cards, technical catalogues etc.
- 25. The watch and ward of the materials installed will be the responsibility of the contractor till handing over to the IITH on completion of work.
- 26. No T & P shall be issued by the IITH.
- 27. Any damage to the installation/ building during execution of work shall be made good by the contractor at his own cost. Repair work if any, should be done with proper cement and sand ratio and to be match with existing finish.
- 28. The rates quoted shall be inclusive of all taxes i.e. GST but exclusive of ESIC & EPF as it would be reimbursed only (As applicable and eligible) after submitted proper documents of their deposits & to the satisfaction of Engineer-in-charge.
- 29. The site is very secured important building, so all related bye-laws are to be followed.

30. The Defect Liability Period (DLP)/Guarantee Period of the executed works shall be minimum 24months only from the date of satisfactory completion, as recorded by the Enineer-in-Charge. Any additional Warrantee/Guarantee provided by the Manufacturer is also applicable.

31. Payment of Running bills

The running bills shall be submitted by the contractor as per the progress of work done at site. However, the following will be the basis of payment for the items claimed under running bills:

- a) Gross Payment to be made on supply of material at site: **70% of quoted rate.**
- b) Gross Payment to be made on installation of material at site: 15% of quoted rate.
- c) Gross Payment to be made on satisfactory Testing & Commissioning of material at site: **15% of quoted rate.**

After receipt of the running bill at IITH, the contractor shall get the executed work and claimed quantities in bill checked and verified from the Engineer-In-charge or his authorized Engineer and after satisfactory verification of work executed at site, the payment to the contractor shall be released.

- 32. As this work is time targeted and in view of the allocated budget/fund for the said work may be lapsed by 31st March 2025, the contractor has to complete the work in all respects as per the time allowed for the completion of work i.e., 45days only or on or before 21st March 2025 strictly, whichever is the earlier and and to this extent the contractor shall ensure to submit the Final Bill of Quantities and Invoice to the CMD office by 21st March, 2025. On receipt of the final bill completed in all respects only by the contractor, the payment will be processed by the CMD office.
- 33. Advance Payment: If the work is not completed on or before 21st March 2025 with all the final bill and measurements submitted by the contractor then for the balance quantum of work (to be assessed by EE-Electrical), the Advance Payment may be made to the contractor on or before 31st March 2025 for the balance quantum of work, at the discretion of IITH in accordance with the Rule 172(1) of General Financial Rules(GFR) of Ministry of Finance, Govt. of India against advance submission of the Irrevocable Bank Guarantee of equal amount by the contractor to IITH, which will be binding on the contractor. This Advance Payment may be released without Prejudice to the right of Govt. to recover Compensation for delay in the execution (if any) in accordance with the Clause 2 of the General Conditions of Contract (GCC)

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATION OF DATA CENTER PRECISION AIR CONDITIONING SYSTEM

IIT-Hyderabad proposes to have a high-performance precision type DX air-cooled unit, which is of floor discharge type. The air-conditioning system will be designed based on the following parameters:

• Outdoor design conditions: IIT-Hyderabad, Telangana

Summer : 41 °C DB, 25.6 °C WB

Inside design conditions (Return Air Conditions): Air-conditioning system shall be designed for 24 hours' operation with following inside design condition.

Temperature	:	22 °C +/- 1
°C Relative Humidity	:	50% +/-
5% Dust Content	:	10
Microns		

The capacity of equipment, specified above, is actual cooling capacity at operating condition during peak summer. Bidder is requested to check and confirm the capacity, before submission of the quotation. Bidder is requested to select the air-cooled condenser for 41 °C ambient condition to avoid any degrading factor during peak summer condition.

Power supply

Power will be made available at 415 V 3 ph / 230 V single ph, 50 HZ and all equipment shall be suitable for the above power supply with variation of + / -10 %(or) stable input supply without fluctuations.

All equipment shall operate at this voltage and any equipment operating at other than this power supply shall be provided by customer.

Power will be provided at a point near indoor unit. Cable from the point to the indoor unit itself will have to be cabled by the PAC contractor.

Precision Air Conditioners Unit Construction specifications:

A. Compressor

The compressor shall be hermetically sealed **Digital scroll type technology**, designed for R410 only.

The compressor shall have proper lubrication system. Safety devices viz. high-pressure switch, low-pressure switch, low oil pressure (if applicable) shall be provided and such devices shall be electronically operated. Manual reset on safety cut out shall be provided. The horsepower for the compressor motor shall be adequately sized or 110% of the rated power required for the unit including drive loss. Capacity control shall be devised by providing at least two compressors working in Tandem for high part load efficiency.

B. Condenser

The Condenser shall be of Air Cooled type and shall be constructed of copper tube with aluminum fins. Tubes shall be designed for a minimum working pressure of 32 kg/ sq.cm. The condenser shall be complete with fans with drive motors and shall be provided with charging connection, safety relief valve and standard accessories, all encased in a powder coated GI casing with built-in electrical items and supporting frame. The condenser shall have the matching capacity with the compressor. There shall be a provision of isolating switch for the fans. The condenser fan shall be propeller type driven directly by brushless direct current (BLDC) EC motor with multiple speed facility. One condenser shall be coupled to one compressor for high efficiency performance. This type of condenser is most suited for installation on terrace. Speed shall vary as per set pressure.

C. Evaporator Cooling Coil

The cooling coil shall be flat type direct expansion type with multi-row deoxidised copper tubes with aluminium fins, complete with a hydrophilic treatment to reduce the surface tension between the water and the metal surface, thus favouring film-wise condensation. Air velocity across the coil shall be limited to 2.5 m/sec. The coils shall be pressure tested and thoroughly dehydrated before assembling.

The coil shall be placed to make the system draw through type. Refrigerant feed control shall be by electronic expansion valve. Temperature control shall be through microprocessor based control panel. Insulated condensate drain pan of SS construction shall be provided within the unit. Liquid receiver with safety plug installed inside the unit

The unit shall be factory assembled, wired, with inter connecting refrigerant piping and built-in microprocessor based control console and tested as per the relevant code. The cooling coil shall be to produce the capacity required under specified coil condition and air quantity.

D. Evaporator Fan

The fan shall be heavy backward curve blade, directly driven with EC motor designed for high efficiency and quiet operation. Fan with steel impeller for backward curve bladed fan, mounted on steel shaft. The bearings shall be ball bearing type mounted on vibration absorbing rubber mounts. The fan motor shall be mounted within the cabinet. Motor horsepower shall be sized for 120% of the rated power required including the drive loss.

The supply fan shall be sized to deliver the required air quantity against the total external static pressure required for the system application, after taking care of all internal static pressure requirements of the units.

E. High Efficiency Filter

A set of High efficiency filters will be located inside the PAC unit cabinet.

The filters shall be high efficiency of 99% down to 5 microns. The filters shall be of cleanable type construction of reinforced glass fiber or cotton fabric or fabric-like material sand witched in between two galvanized wire netting arrangement in an uniformly corrugated form to increase the surface area.

The filters shall have G.I. frames of adequate thickness suitable for long use in an industrial plant. The filters may be in panels of adequate size for easy handling them. . Low airflow and clogged filter alarm sensors consisting of two pressure switches for controlling the operating conditions of the fans and the build-up of dirt on the air filters inside the unit.

The filter panels shall be mounted on the ladder type angle iron holding frames. The frames shall be designed strong enough to take the load of double the pressure drop in dirty condition of the filters. Face velocity of air across the filters shall not exceed 1.5 m/sec.

F. UNIT MICROPROCESSOR CONTROLS:

The microprocessor controller manages the unit operations autonomously. In direct expansion unit the algorithms permit integral management of the Electronic expansion valve (EEV) with consequent optimization of energy saving, constant air flow during dehumidification and absolute operating stability. Units have been designed and developed to interact with all the most widely used Building Management Systems, exchanging data via the most common communication protocols through serial connections.

The Uniguard UG40 user terminal is fitted with a backlit 11x15 pixel LCD display and 6 backlit keys to move between and change parameters. It can be situated on board the machine or, on request, with a kit for wall mounting for the remote control of the unit. By means of the user terminal, you can set the air-conditioners operating parameters, monitor the trend of the main working parameters and read any alarm messages.

The controls should have separate indications for

- a. Various modes of operation (cooling, heating)
- b. Alarm conditions (temperature high, wet floor and loss of air flow)
- c. Date, time and unit identification display
- d. Visual system alarm indication (along with mutable audio alarm as well)
- e. Programmable services interval indication display
- f. Inbuilt sequencing of machines.

The system is a menu driven interface with supporting help screens and shall use multi-protocol data communications. Access to the controller settings shall be protected with passwords to prevent against unauthorized access.

The unit is capable of communicating through an RS-232 communication support to link up to 99 units for monitoring and control purposes. The controller should also incorporate 2 additional spare alarm inputs for customer interface (e.g. Unauthorized entry alarm, building fire alarm etc) manual override switches & selectable alarms. Local & remote alarms will be triggered in case of any alarm conditions being reached

The microprocessor control system can be supplied with the following optional cards:

- RS485 serial adapter for data transfer to a central supervisor system with STD protocol or MODBUS protocol;
- Clock card for managing scheduling operations and for the operations counter functions
- WATER LEAK DETECTOR comprising a control module installed on the electric switchboard and an external sensor.
- Unit should start automatically functioning when power is restored after power failure.
- Fault and Alarm display for Single Phase / Phase reversal / HP LP / TEMP sensor / Condenser fan MCB/ Indoor fan overload

APPROVED MAKES LIST

S. No.	Item Description	Make
1	Precision Air Conditioning Unit	Vertiv/Schneider Electric/ STULZ (Gmbh)/Asetek
2	Copper Refrigerant Pipe	JOBO/MANDEV/RAJCO/ Approved Equivalent
3	LT Wires / Cables	Finolex/ Polycab/Havells
4	PVC drain pipe	Finolex/Asirwad/Supreme/Approved Equivalent

Note: Any other item if not listed above shall be got approved from Engineer-in-Charge before any procurement by the contractor.

<u>Annexures</u>

Annexure-I

On non-judicial stamp paper of minimum Rs. 100

Guarantee offered by Bank to IITH in connection with the execution of contracts) Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/Security Deposit/Mobilization Advance/Refund of milestone withheld amount

OR**

- 4. We,, (indicate the name of the Bank)....., further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending On non-judicial stamp paper of minimum Rs. 100 before any Court or Tribunal, our liabilityunder this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have noclaim against us for making such payment.

- 5. We,......, (indicate the name of the Bank)....., , further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to varyany of the terms and conditions of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being ranted to the said Contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
- 6. We,, further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
- 7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
- 8. We,....., undertake not to revoke this guarantee except with the consent of the Government in writing.

Date

Witnesses:

1. Signature.....

2. Signature.....

Authorized signatory Name and address Name Designation Staffcode no.

Name and address

seal

Bank

- * Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.
- **In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance/Refund of mile stone withheld amount, as the case may be.

ANNEXURE-II

INDEMNITY BOND (VIOLATION OF LAWS, NORMS, ACCIDENTS, DAMAGES ETC) (On Non-Judicial Stamp Paper of Rs.100/-only)

Name of work:

KNOW all men by these presents that I/We_____(Name of Contractor with address) do herebyexecute Indemnity Bond in favour of Indian Institute of Technology (IIT) Hyderabad having their officeatKandi,Sangareddy-502284,Telangana,IndiaandfortheprojectIIT Hyderabad under consideration.

On this day of 2025

THIS DEED WITNESSETH AS FOLLOWS:

I/We, (Name of Contractor) hereby do indemnify and save harmless IITH having their office at Kandi-502284, Sangareddy, Telangana, India from the following: -

1. Any third party claims, civil or criminal complaints/liabilities/material/life loss during site mishaps and other accidents such as snake bites etc or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing/executed civil works by me/us.

2. Any damages, loss or expenses due to or resulting from any negligence or breach of duty on the part of me/us or any sub-Contractor/s if any, servants or agents.

3. Any claims by an employee of mine/ours or of sub-Contractors if any, under the workman compensation act and employers' Liability act, 1939 or any other law rules and regulations in force for the time being and any acts replacing and/or amending the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of execution of the Contract work and/or arising out of and in the course of employment of any workman/employee.

4. Any act or omission of mine/ours or sub-Contractor/s if any, our/their servants or agent which may involve any loss, damage, liability, civil or criminal action.

IN WITNESS WHEREOF THE HAS SET HIS/THEIR HANDS ON THIS DAY OF SIGNED AND DELIVERED BY THE AFORESAID IN THE PRESENCE OF WITNESSES:

1.

2.

ANNEXURE-III

Proforma for Authorization certificate from Approved OEM

Ref. No.

Dated _____

To, The Executive Engineer-Electrical, Indian Institute of Technology (IIT) Hyderabad, Kandi-502284, Sangareddy, Telangana, India.

Dear Sir,

We	who are established and reputable
manufacturers/Technology Providers of	having factory/
factories at	(address of factory) do hereby authorize
M/s(Name and addr	ess of bidder) to submit a bid, negotiate and receive the
order from you against your Tender enquiry r	o. IITH/CMD/ELE/NIT/2024-25/ 21 for the work of

Name of Work:

We ensure that we shall support/ facilitate the M/s______on regular basis with technology/product updates for up-gradation / maintenance/repairing/servicing of the PAC's at IIT Hyderabad (if awarded) as per the terms and conditions mentioned in this tender document on direct payment basis from the successful bidder.

We hereby extend our full guarantee for the services offered by the above firm.

Yours faithfully,

(Name of authorised signatory with signature)

(Name of manufacturer with stamp)

Note: This letter of authority should be on the **letter-head of the OEM** and should be signed by an authorised person. It should be enclosed by the Bidder with the tender document.