

To:

INSTRUCTIONS TO BIDDERS AND GENERAL TERMS & CONDITIONS

Sealed tenders are invited by M/s. Aeronautical Development Agency as given below:-

- a) Annual Maintenance Contract for Manning, Operation and Maintenance of 100 TR, 180 TR, 114 TR & 119 TR for Central Air-Conditioning plant at ADA HQ.Complex {Refer Abstract 'A'}.
 - b) Comprehensive Annual Maintenance Contract for 2 x 7.5 TR Air-Conditioning plant installed for 200 KVA Ups room at ADA HQ.Complex {Refer Abstract 'B'}.
 - c) Comprehensive Annual Maintenance Contract for Carrier make 5.5 TR Ductable Air-Conditioning units installed at ADA - NFTC Complex {Refer Abstract 'C'}.
 - d) Comprehensive Annual Maintenance Contract for DX Ductable type Air-Conditioning units of 11 TR (2 x 5.5TR) installed at P-63 building - ADE Campus {Refer Abstract 'D'}.
 - e) Comprehensive Annual Maintenance Contract of 3TR Triomatic mini package, 1.5/2TR Wall Mounting/Split Air-Conditioner units, 1.5/2/3TR Cassette type Air-Conditioner units and 4/5/5.5TR Ductable Split Air-Conditioner units installed at ADA HQ. Complex, Campus-II & NFTC {Refer Abstract 'E'}.
2. The proposal duly signed on Technical and Commercial Bid should be addressed to D (A&HR), Aeronautical Development Agency, P.B. No. 1718, Vimanapura post, Bangalore-560017, India, to reach on or before **04:00 PM on 25.11.2017**.
 3. Tenders not properly filled, mutilated with incorrect calculation or generally not complying with the conditions will be rejected.
 4. The quotation, would be supported by vendors "**LETTER HEAD**" which is mandatory.
 5. **In a two Bid Proposal**, the Technical and Commercial proposals shall be sent through courier/speed post in separate sealed envelopes duly marked Technical Bid or Commercial Bid bundled in single cover superscribing Enquiry reference on all the envelopes and addressed to the D (A&HR), ADA, so as to reach ADA before scheduled time and date. Bidders may also drop their bids in tender box kept in reception near security main gate at ADA before due date and time. Further please note that, offers received unsigned shall be summarily rejected. The proposals shall not be sent by FAX or though E-Mail.
 6. The scope of work, technical terms and conditions are briefly brought out in the statement of Work/Enclosure/Annexure.

7. Company's profile indicating the ownership, registration as per law of the land and range of products etc., along with the list of references to whom similar services executed GST i.e. CGST/SGST/IGST & UTGST and income Tax registration details etc., are to be furnished along with bids.
8. Tenderers should quote their prices and rates both in figures and in words. No blank spaces are left. All erasures and correction made while filling up the tender should be signed by the tenderer.
9. The tender shall remain open for acceptance for a period of 90 days from the date of opening of the tender.
10. **Every tenderer is expected to inspect the site of the proposed work before quoting. The responsibility of maintaining the system shall rest solely with the contractor. The site visit can be made on working days from Monday to Friday between 9.30 hours to 16.00 hours by prior appointment with Jr.Manager (E & M) on phone No. 08025087241.**
11. Prices quoted shall include all duties, taxes leviable by the central and state governments and other statutory bodies and should be shown in the Bids. The rates quoted will be treated as all-inclusive and no further claims whatsoever will be entertained in this respect.
12. Contractor Capabilities: The tenderer shall bring out specifically in the tender the setup available in Bangalore, for the execution of such projects and for rendering effective service. He shall also identify the engineer who will be assigned for supervision and control of this task listing details of his experience.
13. Service Facility: The contractor must have full fledged regular service and maintenance center at Bangalore with service engineers, skilled technicians, tools and adequate spares etc, to provide prompt and uninterrupted service to ADA. The contractor shall ensure that the security regulations of ADA are strictly followed.
14. First Aid: The contractor shall be responsible for all first aid and he shall keep the site fully equipped with requisite medical amenities.
15. Contractor, staff and labour shall strictly follow the factory regulation in existence. This is for the purpose of entry of labour and material, working condition, hours of working etc. The Contractor's personnel should sign the attendance register maintained contract wise at the security at the time of entry and exit and for this purpose the contractor will submit a list of employees to be detailed for the job assigned. The contractor will also submit the list of employees with their qualifications who will be employed for the job along with the first bill to be claimed. Any change in the list of employees to be intimated and a copy of which should be enclosed to the bill.
16. The contractor will be expected to employ skilled employees with experience for that particular work.
17. The compliance with Provident Fund, ESI for Employees and payment of GST as per extant rules shall be the sole responsibility of the contractor.
18. Payment towards the above will be made on production of documentary proof for having paid to the contributions for the previous month.
19. The AMC payment shall be made through ECS only within 15 days of the completed month. The contractor shall submit the bill in triplicate duly pre-receipted along with the attendance certificate, detailed acquittance roll for the personnel indicating rates of wages for the number of days present, employer contribution of EPF/ESI, employee contribution of EPF/ESI, any other recoveries and net payment made with signature of the personnel employed. The net payment made should tally with ECS/EFT remittance of net pay etc. The attendance sheet furnished by the contractor will be reconciled with the attendance register maintained in the security and payment will be made as per attendance register maintained in the security for which a copy of the attendance register maintained in security will be submitted along with the bill duly attested by the Security-in-Charge.

20. Payment for the workers engaged for the above work shall be paid through e-payment and such payment shall not be less than the Prevailing Minimum wages stipulated by the Ministry of Labour and Employment, Government of India or Government of Karnataka whichever is higher, for the entire work force, including variable dearness allowances notified by the Ministry, periodically. The proof of such e- payment to be submitted to the Addl. D (A & L) every month.
21. The Contractor should ensure that the numbers of personnel as indicated in the scope of work are employed daily for the job and absence/shortfall should be replaced with a substitute. In case the absence is more than two consecutive days in respect of a particular trade of employee and if no replacement is made, one day pay will be deducted as penalty in addition to deduction of pay for the absence period.
22. The Variable dearness allowances on the minimum wages during the currency of the contract, as per the orders to be issued by Ministry of labour and Employment, Government of India or Government of Karnataka whichever is higher shall be duly paid by the contractor to the workers and the claim for the same will be reimbursed by the Department on production of satisfactory documentary proof of such payment. It may be noted that no additional compensation whatsoever shall be reimbursed by the Department during the prevalence of the above contract.
23. The Contractor shall ensure that prevailing minimum wages are paid to the labourers. In this regard, the bank statement of the workforce and wage disbursement statement shall be submitted regularly to Addl. D (A&L) for verification.
24. The contractor shall also ensure PF is deposited to respective provident fund (PF) account of the workforce and proof shall be submitted along with the bill periodically for verification of the statement.
25. The contractor shall ensure that ESI Card is provided to all labourers and their dependents within three weeks upon issue of work order. A Compliance statement from service provider/contractor shall be submitted to EIC and Finance for verification.
26. The contractor shall submit the documentary proof towards payment of GST, PF, ESI and other statutory levis & duties if any to the concerned Department for the previous month for verification and payment of such charges during the current month. In the absence of the documentary proofs as above, the payment of PF, ESI and GST etc. for current month will be with held till production of such proofs.
27. The contractor shall ensure that the payment to workforce deployed is made not later than 7th of succeeding month through e-payment only.
 - a) The contractor shall complete the e-payment by 7th of succeeding month and submit necessary proof from their banker to EIC towards the payment made for preceding month along with Bill/Invoice and other documentary proof.
28. The contractor should issue a signed and sealed wage slip/statement to the personnel containing details such as number of days present, wages payable, recoveries made etc. and net payment credited to bank. Quarterly statement of PF balance also to be furnished to the employees.
29. Contractor shall supply two sets of uniform with COMPANY LOGO and one set of shoes for each worker during tenure of the contract, the cost of which can be recovered from the outfit allowance amount included with wages of each employee.
30. Police Verification report of all the contract personnel engaged for the AMC shall be furnished within fifteen days of deployment. In case of change of any person during tenancy of the contract, the police verification for such personnel should be submitted.

31. The AMC is effective from 01/01/2018 onwards for a period of one year. During this period no escalation or revision in rates shall be accepted except for increase in wages/VDA from time to time as notified by Government. The finalized AMC also includes maintenance of all additional new lines that may be introduced during the AMC tenure of one year. The workmanship and services provided by you will be checked periodically by ADA. In case of unsatisfactory performance, ADA reserves the right to terminate the contract by giving one month's notice.
32. The contractor shall ensure that high standard of safety is maintained at all times by using appropriate safety gadgets. The contractor shall ensure safe working condition for the workmen and should adhere to all the safety requirements. Necessary safety belts / helmets / gumboots shall be used while carrying out the work at heights. Any loss/damage caused to the property of ADA by the contractor's workmen during the course of execution of the work shall be made good by the contractor at his own cost and to the entire satisfaction of the Jr. Manager (Maint) or his representative.
33. The contractor shall be solely liable for accident/injury that may happen to any of the personnel engaged by him or his sub contractor in connection with the contract work. ADA shall not be liable for any damage or compensations in respect of or in consequence of any accident or injury to any personnel in the employment of the contractor or his sub-contractor and the contractor shall indemnify ADA from compensation and proceedings. The contractor or his sub-contractor shall forthwith report to ADA all cases of accident to any of their personal/workmen and shall make every arrangement to render all possible assistance and aid to the victim of the accident.
34. The contractor shall, during the progress of work employ qualified and experienced engineers/supervisor and operators/helpers at site for executing the said work. Any decision, instruction, authorization or approval given by ADA to such contractor's supervisor shall be deemed to have been given to the contractor. The minimum qualification of the various categories of the employees to be employed for the job are as under:-
- Supervisor - Degree in Electrical/Air-Conditioning Engineering or Diploma in Electrical/ Air-Conditioning Engineering with minimum 1 year experience in respect of degree holders and two years for diploma holders.
 - Operator/Electrician - Diploma in Electrical/ Air-Conditioning Engineering or ITI in Electrical/ Air-Conditioning Trade with two/three years experience for diploma/ITI respectively.
 - Operator Assistant - SSLC/PUC Pass with knowledge of Electrical/ Air-Conditioning works.
35. The contractor shall ensure that no personnel of doubtful character antecedents will be employed by him and the contractor shall follow all the security norms of ADA and willing to accept the security checks by the security personnel of ADA. **Your representative/Supervisor/Workers/Technicians should carry Original Identity Card issued by the company to our Security staff for obtaining Pass/Token.** The contractor shall ensure that the contractor's workmen shall not enter any other places in ADA and should restrict themselves to their work area. Any person employed by you shall not be found alcoholic while working inside ADA. ADA shall reserve the right of asking the contractor to expel any person from the work spot and deny entry due to security reasons. The contractor shall carry out the said work at ADA premises for which he shall provide all tools, equipment's, waste, etc and any other items required for executing the work. He shall also be responsible for the safe custody of his belongings/stores while working in ADA. Materials brought to site for incorporation into the work shall accompany with delivery Challan and all the materials shall be entered in the INWARD register at the entry gate.

36. Disputes, if any, arising out of this contract shall be subject to the jurisdiction of courts of law at Bangalore. All other general conditions and instructions for quotation of the tender documents shall be applicable to the contract.
37. If any difference of opinion or dispute would arise between ADA and the contractor in connection with implementation of this contract, both shall mutually discuss to arrive at an amicable solution. Failing an amicable solution, dispute arising in this connection shall be finally settled under the Arbitration and Conciliation Act 1996. The proceedings would be conducted in Bangalore by an Arbitration of three Arbitrators one each from the respective parties and one by mutual consent to be appointed by the respective parties and the award pronounced by the said Arbitrators would not be open to challenge and is final.
38. Commercial Evaluation of the quotes: - The L1 will be determined with reference to the lowest amount quoted for each Abstract separately.
39. **Earnest money deposit (EMD)**: The EMD amount should be Rs 1,00,000/- which may be remitted by way of Banker's Cheque/Pay order/Demand Draft, Bank guarantee valid for six months from Schedule bank/Nationalized Banks in India, drawn in the name of "Aeronautical Development Agency" payable at Bangalore to be submitted. **The details of payment (number, date and amount) to be provided in pre-qualification profile of the bid and original one to be submitted with technical bid.** No other means of EMD payment will be accepted. Tender shall be considered as invalid and rejected if it does not accompany the appropriate earnest money deposit in the prescribed mode as above. Vendors exempted from the submission of EMD, etc as per Govt. of the India directives, copy of the certificate issued by Govt of India for such exemption in lieu of EMD, etc. The EMD Deposited by the tenderer shall not bear any interest to the contractor. The Earnest Money Deposit of unsuccessful Tenderer will be refunded on finalization of the Contract. In case of the successful Tenderer (on whom the order is placed), the Earnest Money Deposit will either be returned on submission of the required Bank Guarantee/DD towards Security Deposit/ or adjusted in the Security Deposit. The Earnest Deposit is liable to be forfeited in case the Accepting officer feels that the Tenderer is not bonafide or the Tenderer modifies or revokes the tender after its submission. The decision of the accepting Officer is final and binding on the Tenderer.
40. **Performance Security**: The vendor shall guarantee the faithful execution of PO and successful and satisfactory performance/AMC under the conditions and for the service specified.
- The Performance Security shall cover the following:-
- Faithful execution of PO. The successful and satisfactory performance/AMC covered under this contract, under the conditions and for the services specified. The performance security shall be issued by a Nationalized bank and made payable to the ADA in the prescribed form which will be furnished on award of contract. On due performance and completion of order in all respects, performance security will be returned to the Vendor without any interest. The PBG shall be for a value 5% of the total PO excluding taxes to be furnished along with the first AMC bill amount and shall have validity for 60 days beyond the completion date of the AMC period.

TECHNICAL BID

PART - A

COMPANY/FIRM/CONTRACTOR PROFILE

Supporting Documents to be annexed with the Tender documents. ADA has the right to reject the applications if found deficient in any respect without further correspondence.

Applications found deficient in any respect are liable to be rejected without further correspondence.

1. Name of the Applicant (Individual /Firm/ Company):

2. Nationality:

3. Address:

a) Registered Office:.....

b) Head Office:.....

c) Address for Correspondence:.....

4. Contact Details:

(i) Telephone Number (with STD Code):

(ii) Fax Number (with STD Code):

(iii) Email ID:.....

(iv) Website URL (If any):

5. PAN Number (Individual/Firm/Company):.....

6. The Contractor should produce a copy of the SGST/CGST/IGST/UTGST Registration Certificate. Applicable GST (i.e. CGST, SGST, IGST & UTGST) paid to the Government after availing input tax credit (ITC) will be reimbursed to the supplier/contractor based on submission of documentary evidence to ADA as proof of remittance of GST by the Supplier/Contractor.

If the bidders desires to ask for GST I.E. SGST/CGST/IGST/UTGST ETC the same must be specifically stated. In the absence of any stipulation, it will be presumed the prices include all such charges and no claim for the same will be entertained.

7. Constitution of Company:.....

(a) Sole proprietorship, (b) Partnership firm, (c) Pvt. Ltd &. (d) Public Ltd.

8. **Name, passport size photo and signature of the Individual(s)/Partner(s)/Director(s) across the photograph (Size of photo should be 2.5 X 3.5 cm having white background and printed name at bottom).**

9. Is the individual/Sole Proprietor/Director of the Company
- a) Dismissed Government Servant. Yes..... No.....
 - b) Removed from approval list of contractors in any dept. Yes..... No.....
 - c) Demoted to a lower class of contractors in any dept. Yes..... No.....
 - d) Having business banned/suspended by any Government in the past. } Yes..... No.....
 - e) Convicted by Court of law. Yes..... No.....
 - f) Retired Engineer/official from Engineering department of Government of India within last one year. } Yes..... No.....
 - g) Direct or Partner of any other company/firm enlisted with ADA or any other department. } Yes..... No.....
 - h) Member of Parliament or any state legislative Assembly. Yes..... No.....
 - i) Director of the firm is a shore holder in any other firm Enlisted in ADA/DRDO. } Yes..... No.....

10. Place of Business :

11. Full Time Technical staff in the Applicants employment and fill up the columns below respect of requisite trade and experience only (separate sheet may be used to furnish full information):-

Name	Qualification	Experience in years	Date of Appointment

12. a) Whether the firm has been already enlisted with ADA or any other department. } Yes..... No.....

b) If Yes, Give the details of the Name of the department, Class & Category, Enlistment Authority & address, Enlistment number and date, Date of Validity and Tendering limit: **Also Enclose self attested copies of the existing enlistment order.**

13. Details of works completed, in progress and secured during the last 3 years ending on March 2017 (i.e. from 2014-15 to 2016-17). This list should include all work whose amount of works done is more than the required magnitude for the class in which registration is required.

14. Certificates from clients in original or attested copy for all eligible works:

Number of documents Attached:

Name and full Signature with seal of the Applicant/Contractor/Firm

Date:

Checklist of Documents Attached for Tender Document

Sl.No.	Document Description	User Status	
		Yes	No
1.	Certificate of Incorporation, Factory License, ISO, IEC, SSI & Nsic Registration Certificates.		
2.	PAN, GST and Registration copies.		
3.	Bank Details, Income Tax & Sales Tax returns, Annual Turnover for Last 3 Years.		
4.	Govt. Organization, Major orders for Maintenance work along with approvals, work orders & performance certificates.		
5.	Proof of constitution (In case of sole proprietorship /HUF: Proof of same to be attached).		
6.	Partnership deed Self Attested.		
7.	Form "A" or equivalent form issued by Registrar of firms.		
8.	Form "B" or equivalent form issued by Registrar of firms.		
9.	Form "C" or equivalent form issued by Registrar of firms.		
10.	In case of Private/Public Ltd. Co. Copy of Article of Association Self Attested.		
11.	Affidavit to be provided by individual/Sole proprietor/Every Partner/Director of the Company.		
12.	Self Attested Copies of the degrees/diplomas/ITI of the technical staff.		
13.	Power of attorney, if any attested by Notary Public.		
14.	Declaration from the technical staff that they are employed with the applicant.		
15.	Attested copy of Electrical License as applicable.		
16.	Original or attested copies of Certificates for works done from concerned clients.		
17.	Copy of Registration under contract labour (Regulation and Abolition) Act 1970.		
18.	EPF/ESI Registration Certificates.		

Part - B

TECHNICAL BID

Abstract - A

**ANNUAL MAINTENANCE CONTRACT FOR MANNING, OPERATION AND MAINTENANCE OF 100 TR,
180 TR, 114 TR & 119 TR FOR CENTRAL AIR-CONDITIONING PLANT AT
ADA HQ.COMPLEX.**

Detailed scope of work

1. The job of Manning, Operation and Maintenance of A/c plant shall be round the clock in three shifts including Sundays and Holidays as per details given below. You have to submit the shift schedule every month to Jr. Manager (E&M) or his representative. If there are changes in the shift schedule, it should be brought to the notice of Jr. Manager (E&M). You shall employ personnel as per clause 34 of the tender enquiry/ RFP. The operators shall record the hourly meter readings in the logbook along with other specific incidences if any. In addition to the above, you will also carry out day to day maintenance problems in air-conditioning system and AHU units. All the above jobs shall be carried out under the supervision of a highly skilled supervisor.

SL.No.	SHIFT	TIME	NO. OF OPERATORS
1.	First shift	0600 to 1400 hrs	One Operator + One A/c Helper
2.	Second shift	1400 to 2200 hrs	One Operator + One A/c Helper
3.	Third shift	2200 to 0600 hrs	One Operator + One A/c Helper
4.	General shift	0800 to 1700 hrs	One Supervisor, One A/c Technician and One A/c Helper
5.	Reliever duty	For Sl.No. 1 to 3 (weekly off)	One operator

2. AMC also includes Manning, Operation, Maintenance, repairs and upkeep of the following:-

100 TR (2 x 50 TR) kirloskar make compressors plant (Artic India Plant)

- 2 Nos. of 50 TR (with 2 Nos. of 50 TR compressors unit).
- 38 Nos. of Fan coil units (30 Nos. of 1.5 TR and 08 Nos. of 2 TR capacities) at various offices at ADA HQ Building.
- 6 Nos. of Air Handling units for computer center.
- Air-cooled condenser 1 No. for the compressor.
- 1 No. of chiller for 2 x 50 TR plants.
- Chill water piping with 2 Nos. of 10 HP pump sets.
- Electrical panels with all accessories and instrumentation.
- Ensure cleanliness and upkeep of the A/c plant and surrounding should be maintained on daily basis.
- Any other items/spares required for replacement of worn out items shall be provided by ADA after verification of the requirement by Jr. Manager (E&M) or his representative.
- The contract shall include the supply of required quantities of Refrigerant Gas R-22, Lubricating oil, grease and other consumables necessary for day to day maintenance works.

3. In addition to Manning and Operation of the following:-

180 TR Voltas Screw type chiller plant

- 3 Nos. of 60 TR Voltas make Air cooled Screw type chiller plant.
- 4 Nos. of Air handling units.
- 2 Nos. of 10 HP Chilled water pumps etc., (Voltas plant).
- Checking of 3 Nos. x 60 TR of Voltas plant daily and liaise with M/s. Voltas Ltd, for immediate repairs / rectification in case of failure or any other problem with Plant.
- When the authorized representatives of M/s. Voltas attend to any maintenance/ repair works, the reports shall be taken and submitted to Jr. Manager (E&M) or his representatives, ADA.
- Ensure cleanliness and upkeep of the A/c plant and surrounding should be maintained on daily basis.

4. 114 TR Blue Star Air Cooled Screw type chiller plant

- 114 TR Blue star make Air cooled Screw type chiller plant.
- 1 No. of Air handling unit.
- 2 Nos. of 15 HP Chilled water pumps, Heat Recovery unit, BMS controllers, VFD controlled etc., (Blue Star Plant).
- Checking of 114 tons of Blue Star plant daily, and liaise with M/s. Blue Star Ltd for immediate repairs / rectification in case of failure or any other problem with Plant.
- When the authorized representatives of M/s. Voltas attend to any maintenance/ repair works, the reports shall be taken and submitted to Jr. Manager (E&M) or his representatives, ADA.
- Ensure cleanliness and upkeep of the A/c plant and surrounding should be maintained on daily basis.

5. 119 TR Carrier Air Cooled Screw type chiller plant for CAD/CAM second floor

- 3 Nos. of AHU units of "EGETECH" make, Model No. ETU150H, CFM - 16000 of Deluxe Box type AHU Units.
- 34 TR (8.5 TR x 4 Nos.), 3 units of Carrier make package Air cooled screw type compressor units.
- 17 TR (8.5 TR x 2 Nos.), 1 unit of Carrier make package Air cooled screw type compressor units for ICT Switch room.
- Electrical panels with all accessories and instrumentation.
- Any other items/spares required for replacement of worn out items shall be provided by ADA after verification of the requirement by Jr. Manager (E&M) or his representative.
- Ensure cleanliness and upkeep of the A/c plant and surrounding should be maintained on daily basis.

6. You shall also carry out the preventative maintenance works by availing total or partial shutdown in co-ordination with the user department in ADA through Jr. Manager (E&M) by giving a request well in advance. All such works including day to day maintenance works shall be carried out as per direction of Jr. Manager (E & M) or his representatives. A proper record of maintenance/repair works carried out shall be maintained upto date and put up to the undersigned through the supervisor employed by you at ADA.

7. All the above checks shall be recorded in a register and submitted to Jr. Manager (E&M) or his representative for their scrutiny.
8. You shall keep all tools and tackles required for upkeep and maintenance shall be the responsibility of the contractor for necessary day to day maintenance works. A list of equipment, tools, instruments held by you at ADA should be intimated in writing.
9. The shut down of the system for any repair / rectification / maintenance should be done after taking prior approval of Jr. Manager (E&M) or his representative and informing the concerned Groups/Departments, well in advance.
10. Maintenance of logbook for recording hourly readings of the plant parameters and submitted to Jr. Manager (E&M) or his representatives.
11. One Trained Engineer should visit the plant on daily basis to check proper functioning of the entire systems.
12. Ensure cleanliness and upkeep of the A/c plant, AHU Rooms and surrounding should be maintained on daily basis.

COMMERCIAL BID FOR ABSTRACT - A

Sl. No.	Description	Skilled	Semi Skilled	Unskilled
1.	Minimum Wages per day	653.00	593.00	536.00
2.	Number of days per month (including Sundays & National Holidays)	26	26	26
3.	Salary for the month	16,978.00	15,418.00	13,936.00
4.	Employer's Contribution of PF @ 12 % on Sl.No.3	2,037.36	1,850.16	1,672.32
5.	Administrative Charges @ 1.16% on Sl.No.3	196.94	178.84	161.65
6.	Employer's Contribution of ESI @ 4.75% on Sl.No.3	806.45	732.35	661.96
7.	Uniform Outfit Allowance @5% of Sl.No.3	848.90	770.90	696.80
8.	Washing Allowance @3% of Sl.No.3	509.34	462.54	418.08
9.	Bonus 8.33 % of Sl.No.3	1,414.26	1,284.31	1,160.86
10.	Total (Sl.No.3 to 9)	22,790.27	20,697.12	18,707.69
11.	No. of Employees Required	1	5	4
12.	Total Wages	22,791.00	1,03,486.00	74,831.00
13.	Service Charges @ _____ on Sl.No.12			
14.	Sub Total per month			
15.	GST @ _____ on Sl. No. 14			
16.	Total Amount in Rs.	A	B	C
17.	Grand Total Per Month (A+B+C)			

Rupees in words: (.....)

The above Wages is prepared based on Central Govt. vide notification No.1285 (E) dated 20.05.2009 of the Ministry of Labour and Employment, Office of the Chief Labour Commissioner(C), New Delhi. Published in circular F. No.1/13(3)/2017-LS-II, dated 20.04.2017.

Note: - L1 will be decided based on the lowest quote received as per Sl no. 17 above

COMMERCIAL BID FOR ABSTRACT - B

**COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT FOR 2 x 7.5 TR (Voltas Make) AIR-CONDITIONING PLANT
INSTALLED FOR 200 KVA UPS ROOM AT ADA HQ.COMPLEX.**

DETAILED SCOPE OF SERVICE

- The maintenance contract is for comprehensive maintenance, which includes compressors, spares and services. The contractor shall keep adequate stock of spares/ peripherals for meeting the maintenance needs and replacement during the tenure of the contract. New genuine parts of same make or equivalent (with the approval of Jr. Manager (Maintenance)) are only to be used for replacement. The maintenance/ servicing shall include both preventive and break down maintenance.
- Bi-Monthly checking and servicing of the plant (6 times in a year for units covered under Bi-monthly service scheme).
- Attending to the Breakdown calls within 8hrs when called by us.
- Half yearly descaling/ cleaning of condensers & chemical cleaning of cooling coils.
- Repairing/ overhauling the components of the equipments at site\in your service station, replacement of worn out parts whenever necessary.
- Refilling refrigerant required, as a result of leak in the system arising out of fair wear &tear.
- Lubricating the bearing of motor, pumps & fans whenever necessary.
- Quarterly inspection of belts, adjusting of tension & replacing worn out belts.
- Checking and Servicing of Electrical Control panels, Switch gears, Starters, Sensors, condenser unit, copper tubing of indoor & outdoor suction line with insulation, G S S Ducting acoustic insulation used for ducting by Fiber Glass covered with Alum. Perforated sheet, powder coated Grilles & Diffuser, MS Collar Damper of Indoor & outdoor unit with mechanical parts hardware items etc. complete in all respect, as a part of contract including replacement.
- In addition to specific calls for repairs, you shall under take preventive maintenance Bi- monthly during the contract period. The service call reports shall be duly signed by the project coordinator & shall be submitted to us for our record. In case of failure to attend the preventive maintenance call as per schedule a proportionate amount shall be recovered or the contract period shall be extended correspondingly.

Rs:.....

Taxes:.....

Net Total:.....

Rupees in words:(.....)

Cost of Compressor:.....

**Signature of the Contractor
with seal and date**

Note :

Option 1: The Tenderer should quote for excluding Compressor in CAMC Cost.

Option 2: The Tenderer shall also quote for Rate only item of the Compressors separately for replacement in for case of necessity.

COMMERCIAL BID FOR ABSTRACT - C
**COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT FOR CARRIER MAKE 5.5 TR DUCTABLE AIR-
CONDITIONING UNITS INSTALLED AT ADA - NFTC COMPLEX**

DETAILED SCOPE OF WORK.

SL.No.	DESCRIPTION	QTY	UNIT RATE	AMOUNT
1.	Comprehensive Annual Maintenance contract for CARRIER make 5.5 TR Ductable Split air-conditioner units including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, G S S Ducting , acoustic insulation used for ducting by Fiber Glass covered with Alum. Perforated sheet, powder coated Grilles & Diffuser, MS Collar Damper of Indoor & outdoor unit with mechanical parts hardware items etc. complete in all respect.			
	<u>Details of A/c unit:</u>			
2.	Indoor unit Model No. 40LC006S	03 Nos.		
	Outdoor unit Model No.38LH066S.	03 Nos.		
	<ul style="list-style-type: none"> • Cooling capacity 16500 k.cal/hr • Air handling capacity 2200cfm • Compressor: Scroll compressor. • Condenser : copper tubes mechanically bonded with aluminum fins • Refrigerant : R22 			
	Total Rs.			
	Taxes			
	Net Total Rs.			

Rupees in words:(.....)

**Signature of the Contractor
with seal and date**

Note :

- Cost of Compressor for replacement in case of necessity.

Option 1: The Tenderer should quote for excluding Compressor in CAMC Cost.

Option 2: The Tenderer shall also quote for Rate for the Compressors separately for replacement in case of necessity.

CONSIDERATION

1. The scope of work includes supply of all spares including oil, gas and compressor.
2. Before commencement of the CAMC, you shall carry out a thorough overhaul of all the units including painting of the units as required.
3. The Maintenance Contract is for Comprehensive Maintenance, which includes spares and services. The contractor shall keep adequate stock of spares/peripherals for meeting the maintenance needs and replacements during the tenure of the contract. New genuine parts of same make or equivalent (with the approval of coordinator) are only to be used for replacement. The maintenance/servicing shall include both preventive and break down maintenance.
4. The number of units indicated in the annexure for maintenance may increase/decrease. However, payment shall be made based on the number of units serviced.
5. The preventive maintenance shall be on Bi-monthly basis. In addition to the preventive maintenance on Bi-monthly basis any number of breakdown call shall be attended. The break down calls for repair shall be attended within 08 Hours. You shall maintain necessary reports for all the preventive and break down maintenance work done and submit them along with your bill. The machine Sl. No. should be indicated in all the reports. In case of failure to attend to preventive maintenance in any particular period as per schedule, the amount due for that period shall be recovered or the contract period shall be extended suitably. The machine number/equipment number should be clearly mentioned in all the reports.
6. Breakdown of any compressor which is beyond repairs shall be brought to the notice of ADA in writing and approval taken for replacement of the compressor. The old defective compressor to be handed over to Electrical Maintenance Dept. store.
7. Stand-by provision: In case the break down could not be rectified within a maximum period of one week, stand-by equipment shall be provided by the Contractor. The same shall be of identical model of same specification or higher version. Lower versions will not be accepted by ADA. If the stand-by equipment could not be provided, the CAMC period shall be extended proportionately, without any additional charge. In addition, the CAMC charges shall be deducted in proportion to every week of break down period from the date of reporting.

COMMERCIAL BID FOR ABSTRACT - D
COMPREHENSIVE ANNUAL MAINTENANACE CONTRACT FOR DX DUCTABLE TYPE AIR-CONDITIONING UNITS
OF 11TR (2 x 5.5TR) INSTALLED AT P-63 BUILDING - ADE CAMPUS

Detailed scope of work

Sl. No.	DESCRIPTION	QTY	UNIT RATE	AMOUNT
1.	<p>Comprehensive Annual Maintenance Contract for CARRIER make 11 TR (2 x 5.5TR) DX Ductable air-conditioner units with Scroll Compressor, Condenser, Filter, Drier, Expansion Valve and Microprocessor based control panel including Electrical control panel accessories.</p> <p>Details of A/c unit:</p> <ul style="list-style-type: none"> • Cooling capacity: 33,000 k.cal/hr • Indoor Unit:- Model No. 40LC012DR • Outdoor Unit:- Model No. 38LH066SDRS • Air handling capacity: 4400 cfm • Compressor : Scroll Compressor, single hermetically sealed unit, 3 phase, 415 volts, 50 Hz • Condenser : copper tubes mechanically bonded with aluminum fins • Evaporator : 4 row coil • Refrigerant : R 22 • Blower motor : 3 phase, single speed 	06 Nos.		
2.	<p><u>Replacement of 11 TR Scroll Compressor (2 x 5.5 TR) Charges :</u></p> <p>Note: The Compressor should be replaced as and when required. The defective Compressor shall be handed over to ADA Store.</p>	Rate Only Item		
	Total Rs.			
	Taxes Rs.			
	Net Total Rs.			

Rupees in words:(.....)

**Signature of the Contractor
with Seal and Date**

Note :

Option 1: The Tenderer should quote for excluding Compressor in CAMC Cost.

Option 2: The Tenderer shall quote rate Compressors separately for replacement in case of necessity.

CONSIDERATION

1. The scope of work includes supply of all spares including oil, gas and compressor.
2. One complete overhauling of the units including painting shall be carried out during AMC period.
3. The Maintenance Contract is for Comprehensive Maintenance, which includes spares and services. The contractor shall keep adequate stock of spares/peripherals for meeting the maintenance needs and replacements during the tenure of the contract. New genuine parts of same make or equivalent (with the approval of coordinator) are only to be used for replacement. The maintenance/servicing shall include both preventive and break down maintenance.
4. The number of units indicated in the annexure for maintenance may increase/decrease. However payment shall be made based on the number of units serviced.
5. The preventive maintenance shall be on Bi-monthly basis. In addition to the preventive maintenance on bi-monthly, any number of breakdown calls shall be attended. The break down calls for repair shall be attended within 08 Hours. In case of failure to attend to preventive maintenance in any particular period as per schedule, the amount due for that period shall be recovered or the contract period shall be extended suitably. The machine number/equipment number should be clearly mentioned in all the reports. You shall maintain necessary reports for all the preventive and break down maintenance work done and submit them along with your bill. The machine SI.No. Should be indicated in all the reports.
6. Breakdown of any compressor which is beyond repairs shall be brought to the notice of ADA in writing and approval shall be taken for replacement of the compressor. The defective compressor as and when required shall be replaced. The defective Compressor shall be handed over to ADA Store. The replacement of Compressor has to be supplied from original supplier (OEM Vendor) or Authorized Sales Dealers. This compressor shall be guaranteed for a period of 12 months from the date of commissioning.
7. The following items are also inclusion of Comprehensive AMC:-
 - Replacement of Sheet Metal Parts, Front Panel grill, Outer Wrapper/Casing. Air Filter, Control Knobs and Painting of any kind.
 - Outside Drain Pipe.
 - Replacement of Defective insulations.
 - Replacement of Condenser Coil/Evaporating Coil deterioration due to site atmospheric corrosion.

COMMERCIAL BID FOR ABSTRACT - E

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT of 3TR TRIMATIC MINI PACKAGE, 1.5/2TR WALL MOUNTING/SPLIT AIR-CONDITIONER UNITS, 1.5/2/3TR CASSETTE TYPE AIR-CONDITIONER UNITS AND 4/5/5.5TR DUCTABLE SPLIT AIR-CONDITIONER UNITS INSTALLED AT ADA HQ.COMPLEX, ADA CAMPUS-II & NFTC

Detailed scope of work

Sl.No.	DESCRIPTION	QTY	UNIT RATE	AMOUNT
1.	Comprehensive Annual Maintenance contract for <u>5/5.5TR DUCTABLE SPLIT AIR-CONDITIONER UNITS</u> including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, G S S Ducting , acoustic insulation used for ducting by Fiber Glass covered with Alum. Perforated sheet, powder coated Grilles & Diffuser, MS Collar Damper of Indoor & outdoor unit including gas charging (R22) with mechanical parts hardware items etc. complete in all respect. Make: HAIER / LG	12 Nos.		
2.	Comprehensive Annual Maintenance contract for <u>4 TR CASSETTE TYPE SPLIT AIR-CONDITIONER UNITS</u> including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, acoustic insulation used for Cu piping, including gas charging (R22) with mechanical parts hardware items etc. complete in all respect. Make: HAIER	16 Nos.		
3.	Comprehensive Annual Maintenance contract for make <u>3 TR CASSETTE TYPE SPLIT AIR-CONDITIONER UNITS</u> including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, acoustic insulation used for Cu piping, including gas charging (R22) with mechanical parts hardware items etc. complete in all respect. MAKE: HAIER/LLOYD/VOLTAS/LG	27 Nos.		

4.	Comprehensive Annual Maintenance contract for <u>2 TR CASSETTE TYPE SPLIT AIR-CONDITIONER UNITS</u> including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, acoustic insulation used for Cu piping, including gas charging (R22) with mechanical parts hardware items etc. complete in all respect. MAKE:HAIER/LLOYD/VOLTAS/LG/Blue Star	79 Nos.		
5.	Comprehensive Annual Maintenance contract for <u>1.5 TR CASSETTE TYPE SPLIT AIR-CONDITIONER UNITS</u> including Electrical control panels, thermostat, condenser unit, copper tubing of indoor & outdoor suction line with insulation, acoustic insulation used for Cu piping, including gas charging (R22) with mechanical parts hardware items etc. complete in all respect. MAKE: HAIER/LLOYD/VOLTAS/LG	34 Nos.		
6.	Comprehensive Annual Maintenance Contract for <u>3 TR TRIOMATIC MINI PACKAGE AIR-CONDITIONER UNITS</u> including Electrical control panels. Details of A/c unit: <ul style="list-style-type: none"> • Cooling capacity 9000 k.cal • Air handling capacity 2040cfm • Compressor : single hermetically sealed unit, 3 phase, 440 volts, 50 Hz • Condenser: copper tubes mechanically bonded with aluminum fins • Evaporator : 4 row coil • Refrigerant : R22 • Blower motor : 3 phase, single speed MAKE:FEDDERS-LLOYD/VOLTAS/ CARRIER / LG	03 Nos.		
7.	Comprehensive Annual Maintenance contract rate for <u>1.5/2 TR SPLIT TYPE AIR-CONDITIONERS, WALL MOUNTING TYPE</u> including Electrical control components. Details of A/c units : <ul style="list-style-type: none"> • Cooling capacity 6000 k.cal • Compressor : Reciprocating Hermetically sealed unit,1 phase, 230 volts, 50 Hz • Refrigerant : R-22 	185 Nos.		

	<ul style="list-style-type: none"> • Automatic Air swing. • Timer/ Quiet operation. • LCD display corded control panel/ Remote control panel. • Blower motor : 1 phase,230 Volts, 50 Hz <p>Make: FEDDERS LLOYD / VIDEOCON/ VOLTAS / CARRIER / L.G./ SAMSUNG</p>			
8.	<p>Comprehensive annual maintenance contract for <u>3 TR FLOOR MOUNTING SLIM LINE (VERTEX) TYPE SPLIT AIR-CONDITIONER UNIT</u> including mounting frame for outdoor unit with Electrical control components complete with accessories like indoor unit, outdoor unit, codeless remote control and Vidoflex insulation foam etc. Charges includes pressure testing, topping of gas, MS angle frame for mounting outdoor units, the suction & liquid pipe, drainage pipe etc., complete in all respect.</p> <p>Detailed specification of 3 TR Slim line (vertex) type Split A/c unit:</p> <ul style="list-style-type: none"> ❖ Cooling capacity: 36000 (BTU/ HR). ❖ Compressor : Scroll Compressor unit, 3 phase, 430 volts, 50 Hz. ❖ Refrigerant: R-22. ❖ Automatic Air Swing. ❖ Timer / Quiet operation. ❖ LCD display corded/ Remote control panel. ❖ Blower motor: 3 phase, 430 volts, 50 HZ. ❖ Air Flow CFM – 1250. 	08 Nos.		
9.	<p>Comprehensive annual maintenance contract for <u>2 TR FLOOR MOUNTING SLIM LINE (VERTEX) TYPE SPLIT AIR-CONDITIONER UNIT</u> including mounting frame for outdoor unit with Electrical control components complete with accessories like indoor unit, outdoor unit, codeless remote control and Vidoflex insulation foam etc. Charges includes pressure testing, topping of gas, MS angle frame for mounting outdoor units, the suction & liquid pipe, drainage pipe etc., complete in all respect.</p> <p>Detailed specification of 3 TR Slim line (vertex) type Split A/c unit:</p>	02 Nos.		

	<ul style="list-style-type: none"> ❖ Cooling capacity: 24000 (BTU/ HR). ❖ Compressor: Scroll Compressor unit, 3 phase, 430 volts, 50 Hz. ❖ Refrigerant: R-22, Air Flow CFM – 800. ❖ Automatic Air Swing. ❖ Timer / Quiet operation. ❖ LCD display corded/ Remote control panel. ❖ Blower motor: 3 phase, 430 volts, 50 HZ. 			
10.	<p><u>Replacement charges for Compressors</u> <u>Rate only item:-</u></p> <p>a. 1.5 TR Compressor.</p> <p>b. 2.0 TR Compressor</p> <p>c. 3.0 TR Compressor</p> <p>d. 4.0 TR Compressor</p> <p>e. 5/5.5TR Compressor.</p>	Rate Only Item		
	Total Rs.			
	Taxes Rs.			
	Net Total Rs.			

(Rupees in words:(.....))

**SIGNATURE OF THE CONTRACTOR
WITH SEAL AND DATE**

Note :

Option 1: The Tenderer should quote for excluding Compressor in CAMC Cost.

Option 2: The Tenderer shall quote rate for Compressors separately for replacement in case of necessity.

CONSIDERATION

1. The maintenance contract is for comprehensive maintenance, which includes spares, services and compressors. The contractor shall keep adequate stock of spares/ peripherals for meeting the maintenance needs and replacement during the tenure of the contract. New genuine parts of same make or equivalent (with the approval of Jr. Manager (Maintenance)) are only to be used for replacement. The maintenance / servicing shall include both preventive and break down maintenance.
2. The AMC is comprehensive. Breakdown of any compressor which is beyond repairs shall be brought to the notice of ADA in writing and approval taken for replacement of the compressor. The old defective compressor to be handed over to Electrical Maintenance Dept. store.
3. Bi-Monthly checking and servicing of the Ac Units (6 times in a year for units covered under Bi-monthly service scheme) should be carried out.
4. Attending to the Breakdown calls within 8hrs when called by us.
5. Half yearly descaling/ cleaning of condensers & chemical cleaning of cooling coils.
6. Repairing/overhauling the components of the equipments at site\In your service station, replacement of worn out parts whenever necessary.
7. Refilling refrigerant required, as a result of leak in the system arising out of fair wear & tear.
8. Lubricating the bearing of motors, blowers & fans whenever necessary.
9. Checking and Servicing of Electrical Control cards, Switch gears, Starters, Sensors, condenser unit, copper tubing of indoor & outdoor suction line with insulation, vidoflex insulation, Indoor & outdoor unit with mechanical parts hardware items etc. complete in all respect, as a part of contract including remote control unit replacement.
10. In addition to specific calls for repairs, you shall under take preventive maintenance once in Two months during the contract period. The service call reports shall be duly signed by the project coordinator & shall be submitted to us for our record. In case of failure to attend the preventive maintenance call as per schedule a proportionate amount shall be recovered or the contract period shall be extended correspondingly.
11. Before commencement of the CAMC, you shall carry out a thorough overhaul of all the units including painting of the units as required.
12. The number of units indicated above for maintenance may increase/decrease. However, payment shall be made based on the number of units serviced.
13. The preventive maintenance shall be on Bi-monthly basis. In addition to the preventive maintenance on Bi-monthly basis any number of breakdown calls shall be attended. The break down calls for repair shall be attended to within 08 Hours. You shall maintain necessary reports for all the preventive and break down maintenance work done and submit them along with your bill. The machine Sl. No. should be indicated in all the reports. In case of failure to attend to preventive maintenance in any particular period as per schedule, the amount due for that period shall be recovered or the contract period shall be extended suitably. The machine number/equipment number should be clearly mentioned in all the reports.
14. Stand-by provision: In case the break down could not be rectified within a maximum period of one week, stand-by equipment shall be provided by the Contractor. The same shall be of identical model of same specification or higher version. Lower versions will not be accepted by ADA. If the stand-by equipment could not be provided, the CAMC period shall be extended proportionately, without any additional charge. In addition, the CAMC charges shall be deducted in proportion to every week of break down period from the date of reporting.

LIST OF AIR-CONDITIONER UNITS INSTALLED AT ADA HQ.COMPLEX

SI.No.	LOCATION & ROOM NOS.	CAPACITY	MAKE	QTY.
5/5.5 TR Ductable A/c				
1.	SDEF Lab GF (Cockpit Area)	5.5 TR (Ductable)	LG	06 Nos.
2.	Weapon Lab GF	5.5 TR (Ductable)	LG	04 Nos.
3.	VR Lab	5 TR (Ductable)	HAIER	02 Nos.
			TOTAL	12 Nos.
4 TR Cassette Type A/c				
1.	Library building	4TR Cassette type	HAIER	08 Nos.
2.	Avionics Lab	4TR Cassette type	HAIER	08 Nos.
			TOTAL	16 Nos.
3 TR Cassette Type A/c				
1.	New Reception (GF & FF)	3TR Cassette type	VOLTAS	08 Nos.
2.	Avionics Lab (Closed Room)	3TR Cassette type	VOLTAS	02 Nos.
3.	Room No. CC-26 (CAD/CAM GF)	3TR Cassette type	BLUE STAR	02 Nos.
4.	Cockpit Environmental Facility (CAD/CAM 1 st Floor)	3TR Cassette type	BLUE STAR	03 Nos.
			TOTAL	15 Nos.
2 TR Cassette Type A/c				
1.	2 nd Floor(Room No.206A & 206B General System Fuel	2TR Cassette type	LG	04 Nos.
2.	Avionics Integration Lab - CAD/CAM 1 st Floor	2TR Cassette type	LG	01 No.
3.	Canteen 1 st Floor (Room No.CF-32) Shri. Mani Maran K T	2TR Cassette type	LG	01 No.
4.	CAD/CAM 1 st Floor ARD & P (CFD Lab) Directorate	2TR Cassette type	LG	04 Nos.
5.	CAD/CAM 1 st Floor IV & V Directorate	2TR Cassette type	LG	04 Nos.
6.	Room No - 101	2TR Cassette type	HAIER	02 Nos.
7.	Room No - 103	2TR Cassette type	HAIER	02 Nos.
8.	Room No - 108	2TR Cassette type	HAIER	02 Nos.
9.	Room No - 109	2TR Cassette type	HAIER	01 No.
10.	Room No - 110	2TR Cassette type	HAIER	01 No.
11.	Room No - 117 & 118	2TR Cassette type	HAIER	02 Nos.
12.	Room No - 126	2TR Cassette type	HAIER	02 Nos.
13.	Room No - 201	2TR Cassette type	HAIER	02 Nos.
14.	Room No - 202	2TR Cassette type	HAIER	02 Nos.
15.	Room No - 204	2TR Cassette type	HAIER	01 No.
16.	Room No - 205	2TR Cassette type	HAIER	01 No.
17.	Room No - 215	2TR Cassette type	HAIER	01 No.
18.	Room No - 217	2TR Cassette type	HAIER	01 No.
19.	Room No - 225	2TR Cassette type	HAIER	01 No.
20.	Room No - 227	2TR Cassette type	HAIER	01 No.
21.	Room No - 235	2TR Cassette type	HAIER	01 No.
22.	Room No - 237	2TR Cassette type	HAIER	01 No.
23.	AMCA Conference Hall	2TR Cassette type	HAIER	02 Nos.
24.	PD Room - AMCA	2TR Cassette type	HAIER	02 Nos.
25.	SDEF seating place Room No.CC-05	2TR Cassette type	BLUE STAR	05 Nos.
			TOTAL	47 Nos.
1.5 TR Cassette Type A/c				
1.	Room No - 102	1.5TR Cassette type	HAIER	01 No.
2.	Room No - 119	1.5TR Cassette type	HAIER	02 Nos.

3.	Room No - 128	1.5TR Cassette type	HAIER	02 Nos.
4.	Room No - CC26	1.5TR Cassette type	HAIER	05 Nos.
		1.5TR Cassette type	BLUE STAR	02 Nos.
5.	Room No - 222	1.5TR Cassette type	HAIER	02 Nos.
6.	Room No - 221	1.5TR Cassette type	HAIER	02 Nos.
7.	Room No - 210	1.5TR Cassette type	HAIER	02 Nos.
8.	AMCA GROUP	1.5TR Cassette type	HAIER	09 Nos.
9.	VR Lab	1.5TR Cassette type	LG	02 Nos.
			TOTAL	29 Nos.
3 TR Triomatic Mini Package				
1.	TRANSPORT GARAGE: • 130508004057 • 130508004054	3 TR Package	FEDDERS LLOYD	02 Nos.
2.	USMS LAB (EARTH ST) : • 20001B0016	3 TR Package	FEDDERS LLOYD	01 No.
			TOTAL	03 Nos.
1.5/2 TR Split Type A/c				
1.	ROOM No. 115 • SS60420010309	2 TR Split type	FEDDERS LLOYD	01 No.
2.	ROOM No.121 • SS060D20010035	2 TR Split type	FEDDERS LLOYD	01 No.
3.	ROOM No. 207 • SS060L20000183	2 TR Split type	FEDDERS LLOYD	01 No.
4.	ROOM No.232 A (CONF.H) • SS060C20020302	2 TR Split type	FEDDERS LLOYD	01 No.
5.	VIP CANTEEN : • SS060J20010202 • SS060J20010204 • SS060J20010205 • SS06K20010207 • SS06K20010206 • SS060J20010203	2 TR Split type	FEDDERS LLOYD	06 Nos.
6.	ROOM No-116 • Sl.No.130500198	2 TR Split type	VIDEOCON	01 No.
7.	ROOM No-105 • Sl. No. 130500200	2 TR Split type	VIDEOCON	01 No.
8.	ROOM No-107 • Sl. No. 130506199	2 TR Split type	VIDEOCON	01 No.
9.	ROOM No-Elect & Maint (removed from Room No. 206) • Sl. No.3CYO-0886	2 TR Split type	CARRIER	01 No.
10.	ROOM No-107B • Sl. No. 4510911	2 TR Split type	VOLTAS	01 No.
11.	Weapons Lab [General System] • A977PZAZ2004 • A977PZAZ 13V • A977PZAZ 19012 • A977PZAZ 20810 • A977PZAZ 172 B • A977PZAZ 300J	2 TR Split type	SAMSUNG	06 Nos.
12.	Security New Reception at ADA.HQ.COMPLEX. (Shri. Stanislaus Mathias)	2 TR Split type	LG	01 No.
13.	Transport and Service Gate	2 TR Split Type	VIDEOCON	04 Nos.
14.	1 st Floor (Room No.123)	2 TR Split type	SAMSUNG	01 No.

15.	1 st Floor (Room No.123A)	2 TR Split type	SAMSUNG	01 No.
16.	1 st Floor (Room No.123B)	2 TR Split type	SAMSUNG	01 No.
17.	1 st Floor (Room No.131)	2 TR Split type	SAMSUNG	01 No.
18.	1 st Floor (Room No.114)	2 TR Split type	SAMSUNG	01 No.
19.	1 st Floor (Room No.132)	2 TR Split type	SAMSUNG	01 No.
20.	1 st Floor (Room No.134)	2 TR Split type	SAMSUNG	01 No.
21.	1 st Floor (Room No.133)	2 TR Split type	SAMSUNG	01 No.
22.	1 st Floor (Room No.132A)	2 TR Split type	SAMSUNG	01 No.
23.	1 st Floor (Room No.132B)	2 TR Split Type	SAMSUNG	01 No.
24.	DG. Room (Substation)	2 TR Split Type	CARRIER	02 Nos.
25.	1 st Floor (Room No.106)	2 TR Split type	SAMSUNG	01 No.
26.	1 st Floor (Room No.107A)	2 TR Split type	SAMSUNG	01 No.
27.	1 st Floor (Room No.114)	2 TR Split type	SAMSUNG	01 No.
28.	1 st Floor (Room No.118)	2 TR Split type	SAMSUNG	01 No.
29.	1 st Floor (Room No.116A)	2 TR Split type	SAMSUNG	01 No.
30.	1 st Floor (Room No.116B)	2 TR Split type	SAMSUNG	01 No.
31.	1 st Floor (Room No.122)	2 TR Split type	SAMSUNG	01 No.
32.	2 nd Floor(Room No.206)	2 TR Split type	SAMSUNG	02 Nos.
33.	2 nd Floor(Room No.131&232)	2 TR Split type	SAMSUNG	05 Nos.
34.	2 nd Floor(Room No.218 & 220/ 227B/107AA)	2 TR Split type	LG	04 Nos.
35.	2 nd Floor(Room No.206)	2 TR Split type	SAMSUNG	02 Nos.
36.	Earth station	2 TR Split type	SAMSUNG	05 Nos.
37.	2 nd Floor(Room No.205)	2 TR Split type	SAMSUNG	01 No.
38.	2 nd Floor(Room No.205B)	2 TR Split type	SAMSUNG	01 No.
39.	2 nd Floor(Room No.205C)	2 TR Split type	SAMSUNG	01 No.
40.	2 nd Floor(Room No.240)	2 TR Split type	SAMSUNG	01 No.
41.	2 nd Floor(Room No.228)	2 TR Split type	SAMSUNG	01 No.
42.	2 nd Floor(Room No.229)	2 TR Split type	SAMSUNG	01 No.
43.	2 nd Floor(Room No.230)	2 TR Split type	SAMSUNG	01 No.
44.	2 nd Floor(Room No.219)	2 TR Split type	SAMSUNG	01 No.
45.	2 nd Floor(Room No.232)	2 TR Split type	SAMSUNG	02 Nos.
46.	2 nd Floor(Room No.208)	2 TR Split type	CHROME	01 No.
47.	2 nd Floor(Room No.238)	2 TR Split type	SAMSUNG	02 Nos.
			TOTAL	76 Nos.
3 TR Floor mounting slim line (vertex) type				
1.	Room No. 121 • 007NLLG000440	3 TR Vertex	VOLTAS	01 No.
2.	Conference Hall Ground Floor • 010NLVE000023 • 008NLGB000615	3 TR Vertex	LG	02 Nos.
3.	3.0 TR Vertex Type A/c (Conference hall)- CAD/CAM	3TR Vertex	VOLTAS	01 No.
4.	IV & V LAB – CAD/ CAM	3TR Vertex	FEDDERS LLOYD	01 No.
5.	ASMS Lab – CAD/CAM 1 st Floor (PS & P Directorate)	3TR Vertex	VOLTAS	01 No.
			TOTAL	06 Nos.

LIST OF AIR-CONDITIONER UNITS INSTALLED AT NFTC

Sl.No.	LOCATION & Room Nos.	CAPACITY	MAKE	QTY.
3 TR Cassette Type A/c				
1.	Telemetry Testing GF-NFTC	3TR Cassette type	CARRIER	06 Nos.
2.	Rig Room HAL side GF-NFTC	3TR Cassette type	CARRIER	03 Nos.
3.	Mini Conference Room- NFTC	3TR Cassette type	CARRIER	01 No.
4.	Big conference Room -NFTC	3TR Cassette type	CARRIER	02 Nos.
			TOTAL	12 Nos.
1.5/2 TR Split Type A/c				
1.	Mobile Telemetry Van -NFTC • 4550031/V/06/D/243890 • 4550031/V/06/D/243858 • 4550031/V/06/D/243717 • 4550031/V/06/D/243773	2 TR (Multi Split) 4 TR= 2 + 2	VOLTAS	04 Nos.
2.	Room No.10- NFTC	2 TR Split type	VIDEOCON	01 No.
3.	Mini Conference Room-NFTC	1.5 TR Split type	VOLTAS	01 No.
4.	Room No. 14-NFTC	2 TR Split type	VOLTAS	01 No.
5.	UPS Room	2 TR Split type	CARRIER	02 Nos.
6.	Telemetry Store Room	2 TR Split type	CARRIER	02 Nos.
7.	Engineer Room HAL Side	2 TR Split type	CARRIER	01 No.
8.	Development HAL side	2 TR Split type	CARRIER	01 No.
9.	Engineer Rig Room HAL Side (Development Room)	2 TR Split type	CARRIER	02 Nos.
10.	Calibration Room HAL Side	2 TR Split type	CARRIER	04 Nos.
11.	Telemetry Building	1.5 TR Split type	CARRIER	06 Nos.
12.	Pilots Room	1.5 TR Split type	CARRIER	06 Nos.
13.	2 nd Floor (Room No.02)-NFTC	1.5 TR Split type	CARRIER	02 Nos.
14.	2 nd Floor (PD office & PA)-NFTC	1.5 TR Split type	CARRIER	03 Nos.
15.	Room No.5 & 6	1.5 TR Split type	CARRIER	02 Nos.
16.	2 nd Floor Conference	1.5 TR Split type	CARRIER	02 Nos.
			TOTAL	40 Nos.
3 TR Floor mounting slim line (vertex) type				
1.	Server Room	3 TR Vertex	LLOYD	01 No.
			TOTAL	01 No.
2 TR Floor mounting slim line (vertex) type				
1.	NFTC III Floor	2 TR Vertex	VOLTAS	02 Nos.
			TOTAL	02 Nos.

LIST OF AIR-CONDITIONER UNITS INSTALLED AT CAMPUS-II

SI.No.	LOCATION & Room Nos.	CAPACITY	MAKE	QTY.
3 TR Vertex				
1.	Room No.36	3 TR Vertex	LLYOD	01 No.
			Total	01 No.
2 TR Cassette Type A/c				
1.	Weapons Lab Ground Floor	2 TR Cassette Type	BLUE STAR	14 Nos.
2.	Avionics Lab FF	2 TR Cassette Type	BLUE STAR	16 Nos.
3.	UPS Room	2 TR Cassette Type	BLUE STAR	01 No.
4.	Room No -38 & 39	2 TR Cassette Type	LG	01 No.
			TOTAL	32 Nos.
1.5 TR Cassette Type A/c				
1.	Room No-34	1.5 TR Cassette Type	LG	01 No.
2.	Room No-35	1.5 TR Cassette Type	LG	01 No.
3.	Room No-37	1.5 TR Cassette Type	LG	01 No.
4.	Room No-40	1.5 TR Cassette Type	LG	01 No.
5.	Room No-41	1.5 TR Cassette Type	LG	01 No.
			TOTAL	05 Nos.
1.5/2 TR Split Type A/c				
1.	EMI/EMC Mobile Shelter, ADA Campus 2 Building. (ADA Asset SL.No.) <ul style="list-style-type: none"> • ADA: S587:451:2001-2005/5 • ADA: S587:451:2004-2005/6 • ADA: S587 :451:2004-2005/7 • ADA: S587 :451:2004-2005/8 • ADA: S587 :451:2004-2005/9 	2 TR Split type	VOLTAS	05 Nos.
2.	Room No - 1	2 TR Split type	LG	01 No.
		2 TR Split type	LG	01 No.
3.	Room No - 2	2 TR Split type	LG	01 No.
		1.5 TR Split Type	LG	01 No.
4.	Room No - 3	1.5 TR Split Type	LG	01 No.
5.	Room No - 4 Conference Hall	1.5 TR Split Type	LG	02 Nos.
6.	Room No - 5	1.5 TR Window	LLYOD	01 No.
7.	Room No - 6 & 7	2 TR Split Type	LG	02 Nos.
8.	Room No - 8	1.5 TR Split Type	LG	01 No.
		1.5 TR Window	VOLTAS	01 No.
9.	Room No -9	1.5 TR Split Type	LG	01 No.
10.	Room No -10	1.5 TR Window	VOLTAS	01 No.
11.	Room No - 11	1.5 TR Split Type	LG	01 No.
12.	Room No -12	1.5 TR Split Type	LG	01 No.
		1.5 TR Window	VOLTAS	01 No.
13.	Room No-13 & 14	1.5 TR Split Type	LG	02 Nos.
14.	Room No-15 to 17	1.5 TR Split Type	LG	02 Nos.
15.	Room No-18 to 19	1.5 TR Split Type	LG	02 Nos.
16.	Room No-20	1.5 TR Split Type	LG	01 No.
17.	Room No-21 &22	1.5 TR Split Type	LG	05 Nos.

18.	Room No-26	1.5 TR Split Type	LG	02 Nos.
19.	Room No-27 to 30	1.5 TR Split Type	LG	02 Nos.
20.	Room No-31 to 33	1.5 TR Split Type	LG	03 Nos.
21.	Room No-36	1.5 TR Split Type	LG	01 No.
		1.5 TR Window	LG	01 No.
22.	Ms. Shyni Thomas Room	1.5 TR Split Type	LLOYD	01 No.
23.	Avionics Lab FF	2 TR Split Type	CARRIER	02 Nos.
24.	ECFM Lab GF	1.5 TR Split Type	LG	06 Nos.
25.	ECFM Lab FF	1.5 TR Split Type	LG	06 Nos.
		1.5 TR Split Type	VOLTAS	01 No.
26.	UPS Room	1.5 TR Split Type	LG	01 No.
27.	Reception	1.5 TR Split Type	LG	02 Nos.
28.	Spares	1.5 TR Window	VOLTAS	03 Nos.
		1.5 TR Split type	LG	01 No.
29.	Ms. Revathi Cabin	1 TR Split Type	CARRIER	01 No.
30.	Avionics Conference Hall	1.5 TR Split Type	CARRIER	01 No.
31.	Avionics Lab (Next to Store Room No.57)	1.5 TR Split Type	CARRIER	01 No.
			TOTAL	69 Nos.