

# **J&K Project Construction Corporation Ltd.**



## **Standard Bidding Document**

<b>Name of Work</b>	<b>Supply, Installation, Testing and Commissioning of Tower/ Cassette/ Split air-conditioning units at Additional Principal block Medical College Jammu.</b>
<b>District</b>	<b>Jammu</b>
<b>Unit</b>	<b>JKPCC Unit Mechanical Jammu</b>
<b>Time of Completion</b>	<b>20 days</b>



# J&K PROJECTS CONSTRUCTION CORPORATION LTD.

(A J&K State Govt. Undertaking)

OFFICE OF DEPUTY GENERAL MANAGER, MCHANICAL UNIT, JAMMU  
Short term E-NIT No. AC/MCJ/NIT/03 of 2018-19 Dated: 19-04-2018

On behalf of Managing Director, Jammu & Kashmir Projects Construction Corporation Ltd., the Deputy General Manager, Mechanical Unit JKPCC Ltd., Jammu invites e-tenders from Principal Manufacturers or their authorized dealers for execution of the following work.

Description of work	Approx. Cost Rs. in Lacs	Earnest Money	Cost of tender document	Time of Completion
Supply, Installation, Testing and Commissioning of Tower/ Cassette/ Split air-conditioning units at Additional Principal block Medical College Jammu.	24.00 lacs	48000/-	500/-	20 days

## Scope of Work:

Supply, Installation, Testing and Commissioning of Tower/ Cassette/Split air-conditioning units at Additional Principal block Medical College Jammu.

## GENERAL CONDITIONS:-

### A. INVITATION:-

For and on behalf of the Managing Director JKPCC Ltd., Jammu e-tenders are hereby invited from Principal Manufacturers or their authorized dealers.

### B. INSTRUCTIONS TO TENDERERS:-

1. The NIT Consisting of qualifying information, eligibility criteria, specifications, Bill of Quantities can be seen/downloaded from the departmental website [www.jktenders.gov.in](http://www.jktenders.gov.in) from Dt: 20-04-2018 from 1800 Hrs to Dt: 26-04-2018 upto 1600 Hrs
2. The Bids shall be deposited in electronic format on the departmental website [www.jktenders.gov.in](http://www.jktenders.gov.in) from Dt: 20-04-2018 from 1800 Hrs to Dt: 26-04-2018 upto 1600 Hrs
3. The complete bidding process will be **online**.

4. The original instruments/hard copy in respect of cost of bid documents along with other documents, EMD must be delivered to the **Dy. General Manager, Mechanical unit JKPCC Ltd., Rail Head Complex, Jammu** on or before **27-04-2018 up to 1400 Hrs.**  
If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received on the next working day at the same time and venue.
5. The Technical bids shall be opened online on **01-05-2018 at 1200 Hrs** in the Office chambers of General Manager, J&K PCC Ltd. Jammu.  
In case of holidays/Office happens to be closed on the date of opening of the bids, bids will be opened on the next working day at the same time and venue.
6. The bids for the work shall remain **valid for a period of 90 days from the date of opening of bids.**
7. Bids must be accompanied by bid security as specified payable at Jammu pledged in favour of **Dy. General Manager, Mechanical unit JKPCC Ltd., Rail Head Complex, Jammu** and **cost of documents as specified payable at Jammu payable to Dy. General Manager Mechanical Unit, JKPCC Ltd., Jammu.** Bid security shall be in the form of CDR/FDR only and shall have to be valid for 06 months or more after last date of receipt of Bid. The cost of downloaded tender documents in form of DD shall be in separate envelop with cover marking - **Cost of document.**
8. A bidder shall not be permitted to bid for works in the jurisdiction of officer responsible for award and execution of contract in which his or his spouse's near relative ( defined as first blood relations, and their spouses) is posted as unit Accountant or as an officer in any capacity between the grades of General Manager and Manager (both inclusive)
9. No engineer of Gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering department of the State Government is allowed to work as a supplier for a period of two years after his retirement from Government service, without Government permission. This contract is liable to be cancelled if either the supplier or any of his employees is found any time to be such a person who had not obtained the permission of the government as aforesaid before submission of the tender or engagement in the contractor's service.
10. Other details can be seen in the bidding documents.
11. Any other information regarding e-tendering process can be had from the Office Deputy General Manager, JKPCC Ltd., Mechanical Unit, Jammu.
12. **To qualify for award of the contract, each bidder should upload and submit the following documents with the tech bid :**
  - A. Original Manufacturer or authorized dealer certificate renewed up-to-date. (Copy of the same shall be submitted in Technical Bids online as well as hard copies to be submitted in the office). Acceptable makes **DAIKIN, O-GENERAL, MITSUBISHI ELCTRIC or equivalent** are only eligible to quote against the clause.
  - B. Manufacturers or authorized dealer should have valid PAN No and GST No. (Copy of the same shall be submitted in Technical Bids online as well as hard copies to be submitted in the office).

- C. Certificate from any agency (Govt/PSU) for successful Supply, Installation, Testing and Commissioning of one no air conditioning work not less than amounting to Rs. 15.00 lacs, in last one year and Performance certificate of the user/s may be furnished. (Copy of the same shall be submitted in Technical Bids online as well as hard copies to be submitted in the office).
- D. Brochure depicting Technical specifications of air conditioning system etc to be supplied.
- E. The applying firm should have local office setup in the state of Jammu & Kashmir along with the proper technical staff. (Copy of the same shall be submitted in Technical Bids online as well as hard copies to be submitted in the office).
- F. Undertaking that the bid shall remain valid for the period of 90 days from the date of opening of bids.
- G. An affidavit affirming that information he has furnished in the bidding document is correct to the best of his knowledge and belief duly attested by the notary.
- H. The firm has to submit a copy of bidding document duly signed and stamp on every page by the authorized signatory for acceptance of all the conditions in the NIT document.

**INSTRUCTION TO BIDDERS REGARDING E-TENDERING PROCESS**

- a) The interested bidder can download the bid from the website <http://jktenders.gov.in>. Bidders are advised to download bid submission manual for the help of bid submission process from the Downloads option as well as from **Bidders Manual Kit** on website <http://jktenders.gov.in>
- b) To participate in bidding process, bidders have to get digital signature certificate card as per information technology Act- 2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get above mentioned digital signature certificate card from any approved vendors. The bidders who already possess valid digital signature certificates card, need not to procure new digital signature certificate card.
- c) **The bidders have to submit their bids online in electronic format with digital signature. The bids proposed without digital signature will not be accepted.**
- d) Bids will be opened online as per time schedule.
- e) Before submission of online bids, bidders must ensure that scanned copy of all the necessary documents have been attached with bid.
- f) The department will not be responsible for delay in online submission due to any reasons.
- g) All required information for bid must be filled and submitted online. The bidder should recheck his online document before submission on line otherwise damaged/ corrupt document shall not be considered in any case.
- h) The original instruments in respect of cost of bid documents & EMD must be submitted to Tender Inviting Authority by Registered post/ Courier or by hand as per time schedule specified otherwise bid shall be treated non responsive out rightly.

- i) The details of hard copies of original instruments in respect of cost of bid Documents & EMD specified in the tender documents should be the same as submitted online otherwise tender will summarily be rejected.
- j) Bidders are advised to use My Documents area in their user on e-tendering portal to store important documents which are used in all tenders like VAT Certificate, sales Tax clearance Certificate etc and attach these certificates as Non Statutory Documents while submitting their bids.
- k) Bidders are advised not to make any change in BOQ (Bill of Quantities) contents/ specifications or its name. In no case they should attempt to create similar BOQ manually. The BOQ downloaded should be used for filling the net item rate inclusive of all taxes and it should be saved with the same with the same name as it contains.
- l) Bidders are advised to scan their documents at 100 DPI (Dots per inch) resolutions with Black and white, JPEG scan properly. Convert scanned images to PDF.
- m) The guidelines for bidders to submit bid online can be downloaded from website <http://jktenders.gov.in> (**Download option**).

**Deputy General Manager**  
Mechanical Unit J&K PCC Ltd.  
Jammu.

## **General Conditions of Contract**

### 1. **Scope of Contract :**

The contractor shall carry out and complete the said work in every respect in accordance with this contract and under the directions of and to the satisfaction of the Engineer in-charge. The Engineer In-charge may in his discretion and from time to time issue written instructions, details, directions and explanations which are hereunder collectively referred to as “Engineer In-charge” instruction in regard to :-

- a) The variation or modification of the quality or quantity of works or omission or substitution of any work.
- b) Any discrepancy between the schedule of quantities and/or specifications.
- c) The removal and/or re execution of any works executed by the contractor.
- d) The contractor shall forthwith comply with and duly execute any work comprised in such Engineer in-charge instructions provided always that verbal instructions directions and explanations given to the contractor or his representative upon the works by the Engineer In charge shall if involving a variation, be confirmed in writing by the contractor within 14 days. And if not dissented from in writing within a further 7 days by the Engineer in-charge, such shall be deemed to be the Engineer In-charge instructions within the scope of the contract.

### 2. **Details Confidential**

The contract and everything contained therein or arising there from shall be treated as strictly confidential. In particular, the contractor shall not publish any information, or photographs concerning the works and shall not use the site for the purpose of advertising except with the written consent of the and Engineer-in-Charge.

### 3. **Contract to Provide Everything Necessary :**

The contractor shall provide everything necessary for the proper execution of the work according to the intent and meaning of the schedule of quantities and specifications taken together whether the same or may not be particularly shown or described therein provided that the same can be reasonably inferred there from.

### 4. **Contractor’s Supervision on the Works :**

The contractor shall give all necessary personal superintendence during the execution of the works, and as long thereafter as the Engineers In-charge may consider necessary until expiration of the “Guarantee period” stated in the Appendix- A hereto.

5. **Access of Engineer In charge to Work :**

The Engineers In-charge/Employer and their representative shall at all reasonable time have free access to the works. The contractor shall give every facility to the Engineers In-charge/Employer and their representative, necessary help for instructions and examinations and test of the materials and workmanship.

6. **Certificate of Virtual Completion :**

The works shall not be considered as completed until the Engineer in-Charge has certified in writing that the works have been 'Virtually Completed' and the guarantee period shall commence from the date of such certificate. Such certificate shall not be issued until all prescribed tests are carried out to the entire satisfaction of the Engineers In-charge or his representative.

7. **Date of Commencement and Completion :**

The date of allotment shall be the 'date of commencement' as stated in the appendix and the contractor shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same on or before the date of completion stated in appendix subject nevertheless to the provisions for extension of time hereinafter contained.

8 **Damage for Non Completion :**

If the contractor fails to complete the works by the date stated in the appendix or within any extended time under clause 11 thereof and the Engineers In-charge certifies in writing that in his opinion the same ought reasonably so to have been completed, the contractor shall pay or allow to the employer the sum named in the appendix as 'liquidated damages' for the period during which the said works shall so remain incomplete and the employer may deduct such damage from any moneys due to the contractor.

9 **Force Majeure :**

The right of the contractor to proceed with the work shall not be terminated because of any delay in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not limited to acts of god, or of the public enemy, restraints of a sovereign state, firms, floods, unusually severe weather and act of the employer.

10. **Delay and Extension of Time :**

In the opinion of the Engineers In-charge the works be delayed:

- a) By force majeure.

- b) By reasons of civil commotion, location combination of workers on strike or lock-out affecting any of the building trades.
- c) In consequence of the contractor for not having received in due time necessary instructions from the Engineers In-charge for which he shall have specifically applied in writing.
- d) By reasons of Engineers In-charge' instructions as per clause 2. The Engineers In-charge shall make a fair and reasonable extension of time for completion of the contract works.

In case the physical progress of the work is delayed as compared to the time schedule referred to above due to reasons which are beyond the control of the contractor, or due to force majeure conditions, or due to delays owing to other agencies, strike or lock-out, the

contractor shall apply in writing for extension of the time for completion of the work, stating clearly the reasons for the delay, period of delay and the extension of time desired. The owner on satisfying himself that the reasons for delay are really beyond the control of the contractor, may grant extension of time for the completion of work. No payment or compensation shall be made to the contractor in the event of the owner is not in a position to allow the contractor to do the work on specific days and time due to whatsoever reason. Such delays are only for the consideration of extension of time. On no account any compensation shall be made to the contractor for extension of time due to delay made by the owner. However the liquidated damages from the contractor can be recovered on account of delay from his side for completion.

11.

**Prices :**

The prices to be quoted by the intending tenderer shall include the supply and installation of all equipment at site, ancillary material and other items whatsoever required for carrying out the job to fulfill the intent and purpose as laid down in the specifications whether specifically mentioned or not. The prices/rates quoted shall be inclusive of all taxes, duties, packing, forwarding, freight, transit insurance and all other levies as applicable by the Central as well as State Government (Except WCT as applicable in the J & K State Govt. on Work contracts) for the completion of the work. The WCT (Works Contract Tax)/ Service Tax applicable in the J & K State Govt. is not to be included in the quoted prices as the J&K Projects Construction Corporation Ltd. is the Main Contractor and the tenderer being the Sub Contractor shall not be liable to the WCT/Service Tax in the present case as per the Commissioner Commercial Taxes Department, J&K Govt. vide clarification No. 08 of 2006 dt 14-08-2006. The successful tenderer/ contractor, on completion of the contract/work shall be issued a certificate on prescribed format from the Main Contractor J&K PCC Ltd. Jammu/Srinagar (to be issued by the competent Authority ) for the purpose of proof of payment of such tax. Failure to include all other taxes and duties will not entitle the contractor to any extra claims from the employer. The contractor's rates shall remain firm and fixed during the currency of the contract



12. **Maintenance Manuals etc :**

Prior to the completion of the work, the contractor shall furnish to the employer (3) three sets of a comprehensive manual, describing all components, furnish a list of spare parts and settings forth in details the instructions for the operation and maintenance of the equipment .

The contractor shall also fix neatly typed and framed instructions in details, for the starting and running of the System.

Any special tools required for the operation or the maintenance of the System shall be supplied free of cost.

13. **Testing and handing over :**

Before the supply payment of all equipments , the firm has to provide test certificates for all the air conditioning equipment including servo stabilizer and also on the completion of the installation the contractor shall arrange to carry out various initial tests, in the presence of and to the complete satisfaction of the Engineers in-charge or his representative. Any defects or shortcomings found during the tests shall be speedily rectified or made good by the contractors at his own expense.

In case of test readings are not satisfactory, contractor's shall carry out all modifications required to bring the unit up to the level of acceptability within a period, not exceeding 10 days from the date of test readings are rejected and failure to do so, will entitle the clients to forfeit the Security Deposit.

14. **Copies of bill**

Contractor shall submit all bills and vouchers in Duplicate

15. **Defects liability**

All equipment and the entire installation shall be guaranteed against defective materials and workmanship for a period of 12 months from the successful commissioning of the System and the AMC period will be considered separately. This however, shall not impair the validity of any action according to any laws enforced for any non-performance of any work under this contract. If the part of the work is found unsound or defective during the defect liability period, the contractor shall repair and make good the same, within a reasonable time, at his own risk, responsibility and cost. Any delay in such repairing and making good by the contractor, shall entitle the Employer to do it at the contractors entire risk, cost and responsibility

16. **Time of completion**

The work shall be completed within 20 days from the date of issue of allotment order.

17. **Rejection of Defective System :**

- a) If on test any component of the system is found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the Engineers In-charge.
- b) In case the contractor fails to remove the defects, within a period considered reasonable by the Engineer in-charge, the employer reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

18. **Variation**

The J.K.P.C.C. shall be entitled to make any variation of the quality or quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any reason it shall, in his opinion be desirable, he shall have power to order the contractor to do.

19 **Contract Specification**

Before execution of contract, the contractor shall check all specification and shall within ten days report any errors, discrepancies or omissions discovered therein to Engineer-in-Charge and obtain appropriate clarifications on the same. Any adjustment made by the contractor without prior approval of JKPCC shall be at his own risk and cost.

20. **Liquidated damages**

- (i) 0.25% ( zero point two five percent ) of contract value for every week of delay after the schedule date of completion of work.
- (ii) Total Amount of Recovery shall be maximum 5 % (Five percent) of contract value.

21. **Specifications**

The Specifications lay down minimum Standards of equipment and workmanship. Should the Tenderer wish to depart from the provision of the Specifications ,either on account of manufacturing practice or for any other reasons, he should clearly draw attention in his tender to the proposed points of departures and submit each complete information and specifications, as will enable the relative merits of the deviations to be fully approached. In the absence of any deviations, it will be deemed that the Tenderer is fully satisfied with the intents of the Specifications and their compliance with the statutory provisions and local codes.

Tenderers not submitting equipment data in full, will do so at the risk of their tenders being valuated with such information as may be available with the J.K.P.C.C.

23. **Completeness of the Job :**

The contractor shall provide all required materials, equipment, ancillary items, etc., to install the air conditioning units capable of fulfilling the intent and purpose of the contract, whether or not each and every item is mentioned in the specifications. Any shortcomings notices at any stage shall be made good at no extra cost.

24. **Guarantee :**

- a) The contractor shall guarantee that all the material, and components supplied, fabricated, designed and installed by him on the System shall be free from defects due to faulty design material and/or workmanship, that the unit shall perform satisfactorily and the efficiency of the System and all the components/parts shall not be less than the values laid down in the specifications and the capacities, shall be at least equal to those specified.
- b) The period of the guarantee shall be minimum (12) Twelve months after the System is successfully commissioned during which period of any or all components found to be defective shall be replaced or repaired free of charge and any short comings found in the system as specified shall be removed at no extra cost and AMC Period will be considered separately. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.
- c) If the defects are not removed with in a reasonable time, the employer may arrange to do so at the contractor's risk and cost, without prejudice to any other rights.

25. **Terms of payment :**

80% payment shall be released after successful supply & installation, 20% payment shall be released after successful testing and commissioning of air conditioners at site and the amount in respect of AMC will be paid half yearly till the completion of AMC period.

.26. **Bank Guarantee :**

The firm shall execute bank guarantee of any scheduled bank in favour of Dy. General Mgr. Mechanical Unit JKPCC Ltd. Jammu amounting to 5% of the value of the contract after the issue of the Allotment order and will be released after warranty period is over. **In case if the rates quoted by the firm are less then 30% of the estimated cost of the work, the firm shall execute an additional bank guarantee of any schedule bank in favour of Dy. General Manager Mech. Unit JKPCC Ltd. Jammu amounting to 15% of the value of contract.**

27. **After Sales Service :**

The firm shall provide free services during the warranty period and give prompt attention to any complaint of consignee at short notice. The firm shall provide service and spares for the said equipment /system for at least 10 years at the mutually acceptable terms and conditions after expiry of the warranty period of 12 months. Whereas AMC period will be treat separately.

28. **Arbitration :**

In case of any dispute arising at any time between the Contractor and the Corporation, the same shall be referred to the Managing Director, JKPCC Ltd., who may give decision on such a dispute himself or request the Government to nominate any other officer of the Government for arbitration. Decision of the Managing Director or the officer nominated by the Government shall be final and binding on both the parties.

**Agreement :**

The firm shall execute an agreement with the corporation within 07 days from the date of allotment of work.

29. All the pages of this document are required to be accepted signed and enclosed with the respective offers .

31. **Earnest Money**

- a) The bidder shall furnish, as part of the Bid, earnest Money of Rs. 48000/=
- b) **The earnest money shall, be in the form of Fixed Deposit Receipt of a scheduled commercial bank, issued in favour of Dy. General Manager Mech. Unit JKPCC Ltd. Jammu. The Fixed Deposit Receipt shall be valid for six months or more after the last date of receipt of bids. Or after the submission of performance security whichever is later.**
- c) Any bid not accompanied by an Earnest Money, **Pledged in favour of Dy. General Manager Mech. Unit JKPCC Ltd. Jammu** shall be rejected by the Employer as non-responsive.
- d) **The earnest money of unsuccessful bidders shall be returned within 30 days of the end of the Bid validity period.**
- e) The earnest Money of the successful Bidder will be released when the Bidder has signed the Agreement and furnished the required performance security.

32. **The earnest money may be forfeited:**

- a) If the bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity :
- b) In the case of a successful Bidder, if the Bidder fails within the specified time limit to :
  - i) Sign the Agreement; and / or
  - ii) Furnish the required performance security

33. Watch and ward of the machinery/equipment supplied during execution shall be included in the scope of contract and any damage to the machinery/equipment during transportation, handling, erection shall be borne by the contractor itself without any extra claim to the department.

34. **Preparation of Bids**
- a) Language of Bid is English
  - b) All documents relating to the Bid shall be in the language specified.
35. **Documents Comprising the Bid**
- The bid submitted by the Bidder shall be in two separate parts:
- Part I**
- This shall be named technical Bid and shall comprise parts:
- i. Earnest Money in a separate cover marked Earnest Money.
  - ii. Cost of document in a separate cover marked cost of document.
  - iii. Qualification information, supporting documents, affidavit and undertaking .
  - v. An affidavit affirming that information he has furnished in the bidding document is correct to the best of his knowledge and belief.
- Part II**
- It shall be named Financial Bid and shall be submitted online.
36. **SUBMISSION OF BIDS**
- 36.1. **Deadline for submission of Bids**
- The submission of bids shall be online only. However the contractor shall submit the hard copy of Technical Bid only, along-with the original EMD and cost of tender document to the tender opening authority i.e. Dy. General Manager Mech. Unit JKPCC Ltd. Jammu not later than 27-04-2018 upto 1400Hrs. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be received upto the specified time on the next working day. This shall be in addition to the bid submitted online, which is mandatory.
- 36.2. The employer may extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.
37. **Late Bids**
- Any Bid received by the Employer after the deadline prescribed will be returned unopened to the Bidder.
38. **Fundamental breach of contract will include:-**
- a) Continuous stoppage of Work for a period of 30 days without authorization of Engineer in-charge.
  - b) Contractor is declared bankrupt.
  - c) Any evidence of involvement of contractor in corrupt practices.
  - d) Contractor delays the completion of work beyond stipulated time of completion.
  - e) Pursuant to the process of termination of defaulted contract, the employer reserves the right to invite fresh tender for the balance work at the risk and cost of defaulter contractor.
- If In case contractor failed to start /complete the work, within the stipulated time period, his CDR/Earnest Money shall be forfeited after termination of the contract. Besides, defaulting contractor shall be debarred from taking works in R&B Department at least for one year.
39. **MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENT ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK:-**Compliance with Labour Regulation Laws of J&K State.

40. **Specification/Quality Control:-** All items of works shall conform to specifications as per IRC/MORTH/NBO/CPWD/SSR/ Any other prescribed specifications.
41. **Insurance:-** Insurance cover to Labour / Machinery / Work / Plant material / Equipment by the contractor shall be mandatory.
42. **Laws Governing the Contract:-**The contract shall be governed by Laws of the land.
43. **Court's Jurisdiction:-**In case of any disputes/differences between contractor and Department the jurisdiction shall be J&K State
44. **Any other item, not included in the scope of work but necessary for completion of work shall be deemed to be included in the scope of work.**
45. **All other terms and conditions are as same as are in vogue in JKPCC Ltd.**

**Deputy General Manager**  
Mechanical Unit J&K PCC Ltd.  
Jammu.

## Technical specification

**Subject:-** Supply, Installation, Testing and Commissioning of Tower/ Cassette/Split air-conditioning units at Additional Principal block Medical College Jammu

**Make- Daikin, Mitsubishi, O-General or equivalent** energy efficient with cordless remote control designed to work at ambient temperatures up to 46 deg C. should have the following Additional salient features required as follows:-

- Pure and clean air
- Dehumidification
- Turbo Mode/ Cooling/Heating
- Timer
- wireless Remote control (sleek with holder)
- Air direction control (Up/ Down)
- Comfort sleep

- For Tower/Floor standing Spli Air Conditioning Units , Cooling only ,minimum 4.5TR capacity 55000BTU/HRAir Flow 1170cfm, noise level 51dba and permissible piping length should not less then 45meter.
- For Refrigerant Piping it should be 9mm nitrile insulation between indoor & outdoor unit of size 6/8 & 3/8 soft drawn
- For Electrical Copper cable it should be 2.5mm sq 4 core between out door and indoor units should be make of heavy duty.
- For PVC drain pipe of size 25mm upto floor drain trap
  
- For Outdoor Unit it should be MS Powder Coated Stand
- For Cassettes type Split Air Conditioning Units , it should be Cooling Only, 1.5Ton Capacity 1.27kw, ISEER 5.2/5 STAR Air Flow 812cfm, noise level 27dba, and permissible piping length should not be less then 30meter,
- For Split Unit (Wall Mounted) AC , Cooling only, 2.0Ton capacity (5 Star Inverter) as per standard specs.
- For Refrigerant Piping it should be 9mm nitrile insulation between indoor & outdoor unit of size 1/2 & 1/4 soft drawn
- For Electrical Copper cable between out door & indoor units as mentioned above.

- For PVC drain pipe it should be size 25mm upto floor drain trap
- For servo stabilizer it should be 3 phase unbalanced oil cooled type 120 KVA with input voltage 130v to 270v Main Cubical Control Panel (Make Electric Field/Power Control/ABB)
- For electrical control panel board it should be made of 2.0 mm thick steel sheet duly powder coated with digital scanner depicting/ scrolling voltage, amperes, indicating lights, stop/maual/Auto selector switch the etc , outgoing current operated single phase preventer. The panel shall include contactors/overload relay with built in single phase protection time delay relay for delayed automatic start of the compressor along with 1 No. incoming 200Amps TPN MCCB. 1 No. Digital scanner with control MCB . 1 No 150 amp Aluminum conductor bus bar duly sleeved 05 OUTGOING 40 amp TPN MCB FOR VERTICOOL AC. 06 No 40 amp SPN outgoing for 2.0 TON SPLIT. 04 Nos 32 amp SPN outgoing for 1.5TON CASSETTE AC 1 No of single phase preventor. Acceptable Make: Power control/Electric field/ABB .

**Dy. General Manager**  
Mech. Unit, JKPCC Ltd  
Jammu