



**Reserve Bank of India  
Estate Department  
Bhopal**

**Notice**

**Supply, installation, testing and commissioning of Air Handling Unit in 5<sup>th</sup> Floor  
at Bank's Main Office Building, Bhopal**

Reserve Bank of India invites quotation for Supply, installation, testing and commissioning of Air Handling Unit in 5<sup>th</sup> Floor at Bank's Main Office Building, Bhopal Estimated Cost of the work ₹9.00 lakh Completion period 2 months. Earnest Money Deposit – ₹ 18,000/-. Sealed hand quotations are invited from Original Equipment Manufacturers or their authorized dealers/integrators for the work The quotation shall be addressed by name to Regional Director, Estate Dept., Reserve Bank of India, Bhopal so as to reach him not later than 17.09.2019 by 2:00pm The details of qualification criteria and the detailed notice inviting quotation are available on the corporate website of the Bank at [www.rbi.org.in](http://www.rbi.org.in).

**Schedule**

Date of issue of quotation	26.08.2019
Last date of issue of quotation	05.09.2019
Date of pre bid meeting	09.09.2019
Last date of submission of quotation	17.09.2019 by 2:00 pm
Date of opening of quotation	17.09.2019 by 3:00 PM

Regional Director  
Reserve Bank of India  
Bhopal

**Reserve Bank of India  
Estate Department  
Bhopal**

**Quotation for Supply, installation, testing and commissioning of  
Air Handling Unit (AHU) system at 5<sup>th</sup> Floor of Bank's Main Office Building,  
RBI, Bhopal**

**Part I**

**Name of Bidder** \_\_\_\_\_

**Address** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Contact No.** \_\_\_\_\_

**Email ID** \_\_\_\_\_

**Due date of submission of quotation:.....**

**Section I**  
**Commercial Terms and Conditions**

**Form of Quotation**

The Regional Director  
Reserve Bank of India  
Estate Department  
Bhopal.

Madam/Sir

Having examined the specifications, drawings, designs and schedule of quantities relating to the works specified in memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum having acquired the requisite information relating thereto as affecting the quote, we hereby offer to supply and execute the works specified in the said memorandum, within the time specified in the time memorandum, at the rates mentioned in the attached schedule of quantities and in all respects with the specifications, designs, drawings and instructions in writing referred to in conditions of quotation, the Articles of 'Agreement, Special Conditions, Schedule of Quantities and conditions of Contract and with such materials as are provided for by us, and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of works	:	Supply, installation, testing and commissioning of Air Handling Unit at 5 <sup>th</sup> Floor of Bank's Main Office Building, Bhopal
(b)	Estimated cost	:	₹ 9.0 Lakhs
(c)	Earnest Money	:	<b>Rs.18,000/-</b> to be submitted by all bidders along with quotation either by DD/NEFT (NEFT details as per <a href="#">Annexure – I</a> )
(d)	Retention money to be deducted from each on-account bill	:	5%
(e)	Time allowed for completion of the work from tenth day after the date of written order to commence work	:	2 months

2. Should this quotation be accepted, we hereby agree to abide by and fulfill the terms and provisions of the said Condition of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to the Reserve Bank of India the amount mentioned in the said conditions.
3. The list showing the particulars and the names of manufacturers of specified item are enclosed.
4. The details of our bankers are

<b>Sr. No.</b>	<b>Name of Bank</b>	<b>Branch and its complete address</b>	<b>Name of the contact person</b>	<b>Telephone and FAX number</b>
1	2	3	4	5

We are enclosing herewith list of our clients with complete details as per the Bank's proforma.

Name of the partner of the firm authorized to sign

(or)

Name of person having power of Attorney to sign the contract.

(Certified true copy of the Power of Attorney should be attached.)

Yours faithfully

Signature of Contractor

(Signatures and addresses of witnesses)

## Section – II

### Commercial Conditions

- 2.1 Sealed hand quotations are invited from Original Equipment Manufacturers or their authorized dealers/integrators for the work of **Supply, installation, testing and commissioning of Air Handling Unit in 5<sup>th</sup> Floor at Bank's Main Office Building, Bhopal**. The quotation shall be addressed by name to Regional Director, Estate Dept., Reserve Bank of India, Bhopal so as to reach him not later than 14:00Hrs on \_\_\_\_\_.
- (a) The firm shall enclose the relevant catalogues/ leaflets/ brochures of the manufacturers of the equipment offered. Incomplete quotations are liable for rejection.
- 2.2 Quotation shall be submitted in two parts viz. Part I containing technical and commercial details of the offer and Part II containing prices only. While Part I will be opened on \_\_\_\_\_ at 3:00 PM in the presence of the intending bidders who choose to be present. Part II will be opened on subsequent date, which will be intimated to the bidders in advance.
- 2.3 The Reserve Bank of India reserves the right to accept or reject any or all the quotation, in full or in part, without assigning any reason therefore. The Bank also reserves the right to accept the quotation of any firm. Bidders are requested to quote unit rates and amounts separately. They are also requested to use the enclosed proforma only (and not to use their own format).
- 2.4 The quotations shall be valid for acceptance by the Bank for a period of 90 days from the date of **opening of Part I of the quotation** and shall be extended by such period as may be mutually agreed to.
- 2.5 All the bidders shall deposit an Earnest Money of **Rs.18,000/- (Rupees Sixteen Thousand Only) by NEFT/DD in favour of Reserve Bank of India, Bhopal** drawn on a schedule bank along and to be submitted along with the quotation. Quotation, which is not accompanied by such earnest money will not be considered. The EMD of the unsuccessful bidders will be returned to them. The Earnest Money Deposit of the successful bidder will be retained by the Bank as security for due fulfilment of the contract obligations/conditions.
- 2.6 The rates quoted shall be inclusive of all taxes, duties, transport, packing, forwarding, insurance etc. and shall be for the complete work duly installed and commissioned at site. The prices quoted shall remain firm for the entire period of contract and shall not be subjected to any variations in the foreign exchange, variation in labour rates or variations of any other taxes, levies, duties etc. No import license will be furnished by the Bank. The bidders shall make their own arrangement for import of any part or components, if any, required for completion of the work.
- 2.7 As regards make of equipments acceptable to the Bank the bidders are advised to refer to system requirements / description and to the list of approved make of materials/ equipments.

2.8 This contract is neither a fixed lump sum contract nor a piece work contract but is a contract to carryout work in respect of the supply, installation, testing and commissioning of AHU, to be paid for according to actual measured quantities at the rates contained in the schedule of rates and probable quantities or as provided in the said conditions.

2.9 Bidders to quote strictly as per BOQ. The schedule of quantities is based on probable estimates/quantities. The quantities for individual items may increase or decrease without any restriction depending upon the site conditions and requirements solely at the discretion of the Bank.

2.10 Time is the essence of the contract. The entire work of supply, installation, testing and commissioning of the system shall be completed within a period of **two months** from the 10th day of date of issue of work order failing which liquidated damages at a rate of 0.25% of the contract amount per week, subject to a maximum of 10% of the contract value, of delay beyond the stipulated period will be levied.

2.11 The successful bidder shall execute an agreement with the Bank on stamped paper within fourteen days of receipt of letter of acceptance. However, the issue of letter of acceptance by the Bank shall be construed as a binding contract as though such an agreement has been executed and all the terms and conditions shall apply on this contract.

**2.12 Warranty/Defect Liability period:**

The equipment supplied shall be guaranteed against all types of defects for a period of one year from the date of handing over of the equipment to the Bank. Any defects in the system/sub-assemblies, found within the guarantee period, shall be rectified/ replaced by the bidder without any additional cost to the Bank. The rate should include for servicing at monthly interval or earlier, as prescribed by the manufacturer and as mutually agreed to, during this period shall be carried out free of cost.

Bidders shall also indicate the service facility available at the place of installation and technical set up, the contact telephone number and address of their service centers. If the bidder has no existing service centre at the place of work, the bidders shall indicate details of such service centre from which the proposed system will be serviced, the staff strength at that centre and the availability of spares for the system at that center. In case a firm has memorandum of understanding or agreement with a third party on behalf of the firm to carryout servicing at a centre, copy of the agreement or memorandum of understanding shall be submitted along with the quotation.

2.13 The bidder should impart training to the Bank's staff at the site of work for a period of one week on the system before handing over the system without any extra charges.

2.14 The bidders are advised to visit the site of installation and acquaint themselves of the site conditions before quoting. Bidders should be specific and offer comments only if their system differs from the Bank's detailed specifications/features in any manner. The successful bidder, on completion of work, shall furnish three sets of schematic and layout drawings and maintenance manuals to the Bank.

**2.15 Testing of the system:** Before dispatching the equipment to site, the equipment may, at the discretion of the Bank be inspected by the Bank's Engineer at the manufacturer's works and then cleared for shipment. The cost of arrangements for conducting the tests if any shall be borne by the bidder and shall be included in the quoted rates. This will however, not in any way absolve the contractor of his responsibility about proper performance of the system/components after erection & commissioning at the designated site.

**2.16 TERMS OF PAYMENT:**

The following terms of payment, subject to statutory deductions and retention @ 5 % of value of work as retention money, will apply to the contract:

- (a) 60% of the quoted rate, on pro rata basis, against delivery of material after checking at site.
- (b) 40% of the quoted rate on completion of erection, testing, commissioning and handing over of the system to the Bank.
- (c) The Retention money of 5% will be recovered from each on-account bill till the total recovery amounts to 5% of contract value. The Retention money will be released after satisfactory completion of the one year Defect Liability period.

2.17 The payment for the system will be made by the office at which the system is supplied and installed. The dispute arising out of this contract will also be sorted out within the jurisdiction of courts situated in the same state where the said the system has been installed.

2.18 On completion of installation, testing and commissioning, the equipment will be tested for establishing their performance vis-à-vis the accepted specifications.

2.19 The contractors shall submit all technical details of the system along with the quotation. The bidders are requested to use the enclosed proforma only for this purpose (and do not use their own formats and data sheets). However, if they wish to submit any additional information/details, they may furnish the same on a separate sheet along with Part I of the quotation.

2.20 The bidders shall give the full name, contact numbers, email id and postal addresses of clients to whom similar equipment has been supplied by them.

2.21 The bidders are requested to fill in the enclosed proforma on terms and conditions of the contract. They are advised to confirm whether they agree to the Bank's terms and conditions by indicating "YES" or "NO" only. If "NO" then only they shall list out the deviations proposed by them in the appropriate column.

**2.22 Insurance:**

The contractor shall take all insurances at his own cost to cover all kinds of risks from the time the equipments/materials leave the manufacturer's works till handing over the system to the Bank, in the joint names of the Reserve Bank (being first name) and the contractor before commencement of work and it shall cover the following risks.

- (a) Contractors all risk insurance inclusive of damage during transportation,

fire insurance, Storage, erection testing and commissioning policy for the full contract value.

- (b) Workmen compensation policy for the employees of the contractor at site.
- (c) Third party liability policy for a total of Rs. 10.00 lakh and with a limit of Rs. 2.00 lakh per accident.

2.23 All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after their completion and whether before or after the determination abandonment or breach of the contract) shall be referred to and settled by the Bank who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Bank with respect to any of the excepted matters shall be final and without appeal as stated in hereof. But if either the Contractor be dissatisfied on any matter on which a decision is taken by the Bank as above, except any of the expected matter the Contractor may within 28 days after receiving notice of such decision give a written notice to the other party requiring that the matters in dispute be arbitrated upon. Such written notice shall specify the matters, which are in dispute or difference of which such written notice has been given. If both the parties agree, a single arbitrator would be appointed for the purpose. In case no agreement could be reached on the appointment of single arbitrator, both the parties will nominate one person each as an arbitrator on their behalf. The two arbitrators nominated by the parties shall nominate one more person to act as third arbitrator.

The arbitrator or Arbitrators, as the case may be, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to the excepted matters, referred to in the preceding clause, and to determine all matters to dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The arbitrator or Arbitrators, as the case may be, shall make his or their award within one year (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case during the arbitration proceedings the parties mutually settle or compromise their dispute or difference, on the parties filing their joint memorandum of the settlement or compromise, the Arbitrator or the Arbitrators as the case may be, shall make an award in terms of such settlement or compromise.

Upon any such reference, the decision on the cost incidental to the reference and Award respectively shall be in the discretion of the arbitrator or Arbitrators as the case may be, who may determine the amount thereof or direct the same to be taxed as between the party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid.

This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof.

The award of the arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence and shall until the decision of the Arbitrator or



Arbitrators, as the case may be, is given, abide by the decision of the Bank. No award of the Arbitrator or Arbitrators, as the case may be, shall relieve the Contractor of his obligations to adhere strictly to the Bank's instructions with regard to the actual carrying out of the works. The Employer and the Contractor hereby also agree that arbitration under this Clause shall be a condition precedent to any right of action under the Contract.

Signature of the bidder \_\_\_\_\_

Name of the firm \_\_\_\_\_

Seal of the firm \_\_\_\_\_

## Safety Code

1. First aid appliances including adequate supply of sterilized dressings and cotton wool shall be provided in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all work that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench, whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
6. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing; minimum height shall be one meter.
7. No floor, roof or other part of the structure shall be so overloaded with debris of materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
  - i) No paint containing lead or lead products shall be used except in the forms of paste or readymade paint.
  - ii) Suitable face masks shall be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
10. Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of cessation of work.
11. Hoisting machines and tackle used in the works, including their attachments, anchorage and support shall be in perfect condition.
12. The ropes used in hoisting or lowering material or a means of suspension shall be of durable quality and adequate strength and free from defects.
13. The contractor shall provide all the safety gadgets to the workers for carrying out the work as per statutory norms.
14. During the work execution necessary fire safety measures shall also be taken.

## **Section - III**

### **Technical Specification**

#### **3.0 Scope of Work**

The scope of work shall cover supply, installation, testing and commissioning of air handling unit (AHU) as detailed under this specification and as provided in the bill of materials/schedule of quantities.

The unit shall be of double skinned type. The outer casing shall be 0.6mm thick galvanized steel and the inner casing shall be 0.6mm thick galvanized steel. The insulation material shall be PUF material of minimum 25mm thick sandwiched between the two panels, as per the standards of the manufacturer.

The drain pan shall be of stainless steel material of not less than 1.2mm thick and externally insulated with 10mm thick closed cell polyethylene foam insulation or nitrile rubber or PUF with necessary dual slope to facilitate fast removal of condensate. Drain connections shall be provided on both ends and shall be suitably piped to the nearest drain.

The blower shall be DIDW backward curved impeller of galvanized construction. The shaft shall be of steel, liberally designed and supported on ball or roller bearings adequately sized. The drive motor shall be of TEFC squirrel cage induction motor with IP 55 protection and with class F insulation. The motor shall be specially designed for quiet operation and motor speed shall not exceed 1440 RPM. The design, construction features and testing of the motors shall be as per the latest version of IS 325. Routine test certificates shall be furnished for the motor. The noise level shall not exceed 85db. Motors used should be of Energy Efficient type with not less than IE2 rated confirming to IS 12615: 2018.

The drive motor shall be preferably direct coupled. If this feature is not possible, suitably designed flat belts shall be provided.

The AHU shall have inspection covers/doors for attending to various parts requiring maintenance along with a door limit switch for the motor to start/stop of the unit and light to off/on, when its cover/doors are closed/opened respectively. The chilled water coil shall be of Copper tube with Aluminum fins. The coil shall be with 4/6 rows with 11 to 13 fins per inch spacing. The coil shall be tested for a pressure of 10 Kg per Sq.cm (g) and test reports shall be furnished for this.

Each unit shall be provided with a factory assembled filter section containing water washable synthetic type air filters having extruded aluminum frame with filtration capacity of 10 micron particle size with an efficiency of 90%. The media shall be supported with HDPE mesh on one side and aluminum mesh on the other side. Filters shall fit so as to prevent by pass. Holding frames shall be provided for installing a number of filters cells in banks. These cells shall be held within the frames by sliding the cells between guiding channels. Face velocity across fine filters shall not exceed 152 MPM.

Provision for mounting thermometers and pressure gauges shall be provided at inlet and outlet of chilled water line.

Motors up to and including 5HP shall have DOL starter and above this rating shall have star/delta starter. All power/control cables and wires should be of FRLS/FRLSH grade.

### 3.1 Data to be furnished by the Bidders

S.No	Description	To be filled by the bidder
1.	Make	
2.	Model Number	
3.	Material of body construction	
4.	Capacity of the AHU unit in CFM	
5.	Capacity of the AHU unit in TR	
6.	Size of the AHU unit (LXBXH) in mm	
7.	Thickness of insulation material	
8.	Material of drain pan construction	
9.	Number of pre filters	
10.	Size of pre filters (LXBXH) in mm	
11.	Thickness of filters in mm	
12.	Type of pre filters	
13.	Fan Type	
14.	Fan Make	
15.	Fan size dia/sweep area in mm	
16.	Fan RPM	
17.	Fan HP/KW	
18.	Number of fans	
19.	Capacity of fan/static pressure	
20.	Motor Make	
21.	Motor type	
22.	Motor capacity in HP/KW	
23.	Motor RPM	
24.	Starter type	
25.	Starter make	
26.	Drive	
27.	Filter area (Sq.ft)	
28.	Velocity over filters	
29.	Pressure drop over filters	
30.	Coil make	
31.	Model number	
32.	Coil rows	
33.	Tube length in mm	
34.	Tube diameter in mm	

35.	Fin material	
36.	Fin spacing	
37.	Number of coils	
38.	Accessories and controls	
	(a) Pulley and V-belt	
	(b) canvas connection for ducts	
	(c) Anti vibration pads	
39.	Bearing Ball/roller	
40.	Make of bearings	

**Appendix Hereinbefore Referred To**

1.	Defects liability Period	12 months from the date of issue of virtual completion certificate.
2.	Period of final measurement	One month from the date of final commissioning.
3.	Date of Commencement	10 <sup>th</sup> day from the date of letter of award of work.
3.	Period of completion	Two months from the 10 <sup>th</sup> day of work order
4.	Liquidated Damages	Rs.0.25% of the contract value per week of delay subject to a maximum of 10% of the contract amount.
5.	Retention Percentage	5% of value of work shall be retained from each on-account bill till the recovery amounts to 5% of contract value and will be held till the end of defect liability period. No interest shall be paid on this amount.
6.	Installment after virtual completion	100% of Earnest money deposit shall be released.

Signature of Contractor

**Section IV**  
**Check List**  
**Commercial Conditions**

Sr. No.	Description	Bank's terms	Whether acceptable to the bidder or not (please indicate YES or NO)
1.	Validity	90 days from the date of opening Part I.	
2.	EMD	<b>Rs.18,000/-</b> will be collected from all the bidder along with the quotation.	
3.	Prices	Firm, inclusive of all taxes, duties, insurance, levies during the contract period.	
4.	Completion period	2 months from 10 <sup>th</sup> day of the date of issue of work order.	
5.	Liquidated damages for delay in completion of work	0.25% of the contract amount per week of delay subject to maximum of 10% of contract value.	
6.	Penalty during warranty	₹500/- per day if defect is not rectified within 4 hours of intimation.	
7.	Guarantee	One year after the date of virtual completion.	
8.	Factory & field tests	As per para 15 and 18 of Commercial conditions	
9.	Terms of payment	As per para 16 of Commercial conditions.	
10.	Insurance	Shall include for 1. Contractor All Risk Policy including fire for supply, transit, storage, erection, testing and commissioning etc., & Fire Policy. 2. Workmen compensation policy and 3. Third Party Liability policy as per terms and conditions	

Signature of the contractor \_\_\_\_\_

Name of the firm \_\_\_\_\_

Seal of the firm \_\_\_\_\_

**Section V**  
**Make of Materials**

**5.1 List of approved makes of materials**

The make of equipment shall be from among those mentioned below. All electrical items, equipment, fittings having BIS marks and subject to Bank's approval.

<b>Sl. No</b>	<b>Item Description</b>	<b>Approved make</b>
1.	Fan make	Kruger/Nicotra/Lau
2.	Motor make	ABB/Siemens/Kirloskar/Crompton
3.	Power Cables	CCI/Finolex/Polycab/Universal/Gloster
4.	Control cables	CCI/Finolex/Polycab/Gloster
5.	MCCB/MCB/RCCB	Legrand/ABB/L&T
6.	AHU	Zeco/Bluestar/Voltas/ETA or equivalent make as approved by the Bank's Engineer.
7.	GI Sheets	TATA/JINDAL
8.	Insulation material	Twiga/Owens corning or equivalent make as approved by the Bank's Engineer.

- Motors used should be of Energy Efficient type with not less than IE2 rated confirming to IS 12615: 2018
- All power/control cables and wires should be of FRLS/FRLSH grade.



**Annexure - I**

**NEFT Details for effecting e-payment**

Name of the Institution: Reserve Bank of India, Bhopal

Address (in full): Reserve Bank of India, Bhopal

1	Name of the Account Holder (as appearing in the Bank Account)	Reserve Bank of India, Bhopal
2	<b>Account Number</b>	<b>186003001</b>
3	Type of Account (Savings, Current etc.)	Current
4	<b>PAN Number</b>	<b>AAIFR 5286M</b>
5	Name of the Bank	RBI, Bhopal
6	Name of the Branch	RBI, Bhopal
7	Address of the Bank	RBI, Bhopal
8	<b>NEFT/IFS Code</b>	<b>RBIS0BLPA01 (0 in the code represents ZERO)</b>
9	Name of the Account	<b>RBI, NEFT, Inward Received</b>
10	GST Number	<b>23AAIFR5286M120</b>



**Reserve Bank of India  
Estate Department  
Bhopal**

**Quotation for Supply, Installation, Testing and Commissioning of  
Air Handling Unit (AHU) at 5<sup>th</sup> Floor of Bank's Main Office Building,  
RBI, Bhopal**

**Part II  
Price Bid**

**Name of Bidder** \_\_\_\_\_

**Address** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contact No.** \_\_\_\_\_

**Email ID:** \_\_\_\_\_

**Last date for Submission :**

**RESERVE BANK OF INDIA**

**ESTATE DEPARTMENT**

**Bhopal**

**Part-II (Price Bid)**

**Name of the work:** Quotation for Supply, Installation, Testing and Commissioning of Air Handling Unit (AHU) at 5<sup>th</sup> Floor of Main Office Building.

<b>S.No</b>	<b>Description</b>	<b>Qty</b>	<b>Amount</b>
1.	<p>Supply, installation, Testing and Commissioning of double skinned Air Handling Unit with a minimum of 20000CFM (50TR) air flow capacity confirming with the below specifications:</p> <p>a) Modular AHU panels with GI sheet of 0.60mm thick for both inner and outer casing with 25mm, CFC free PUF insulation sandwiched in between. The outer panel shall have pre-coating for corrosion resistance as also to provide a very good finish.</p> <p>b) Blower section with DIDW backward curved centrifugal fan with TEFC squirrel cage Induction motor with VFD compatible (IP 55 protected, class F insulation and energy efficient not less than IE2 rated) driven with V-belt.</p> <p>c) Drain section with 1.2mm thick SS drain pan</p> <p>d) 50mm thick Al frame HDPE 3 ply air pre-filters (box type) with efficiency of 90 to 95% down to 10 microns.</p> <p>e) Coil section with 6 row chilled water coil.</p> <p>The work includes, new AHU unit to be installed in place of old AHU by removing of the same and connecting to the existing AC duct through non-returnable G.I collar damper/VCD and double flexible fire retardant canvas connection arrangement as per the site requirement and the mounting of the unit on foundation/floor with anti-vibration pads to avoid vibration transmission etc. The unit has to be connected to the existing AHU electrical panel available at the floor and to be tested.</p>	1Unit	

2.	<p><b><u>Ducting and Accessories</u></b>  Supply, installation, fabrication and commissioning of GI ducts 18/20 GI sheets as per IS 655 for connecting the AHU to existing distribution of ducts with necessary GI angle support with suspended rods, grouted in ceiling as directed.</p> <p>(a) 18 G GSS ducting  (b) 20 G GSS ducting</p>	20Sqmt. 20Sqmt.	
3.	<p>Supply and provision of acoustic lining/insulation with 25mm thick resign bonded fibre glass rigid board of density 48Kgs/cubic mtr fixed inside surface of ducts with necessary fixing materials i.e., GI bolts &amp; nuts, GI channels covered with RP tissue paper including covering finally with 28 gauge perforated aluminium sheet (with min 20-40% perforations).</p> <p><b>Make of Insulation Material:</b> TWIGA/Owens corning or equivalent as approved by Bank's engineer</p>	20Sqmt.	
4.	<p><b>Less: Rebate</b> for dismantling and taking away the old AHU unit along with motor and all accessories as is where basis.</p>	L.S	
(A) AMOUNT (SI.No.1+2+3)			
(B) GST on (A)			
(C) TOTAL Amount including taxes (A+B)			
(D) GRAND TOTAL (C- Less Rebate(SI.No.4))			

TOTAL AMOUNT IN WORDS: \_\_\_\_\_

Date:

Place:

Seal and Signature of the Contractor