

BHARATIYA RESERVE BANK NOTE MUDRAN (P) LIMITED

(Wholly owned subsidiary of Reserve Bank of India)

P.O. RBNM, Salboni, Dist. Midnapore (W), West Bengal, Pin Code 721132

Tender Document for Supply, Installation and Testing Of 5 Nos. Air Handling Unit (AHU)

T.E. No. 019/SAL/MMD-MAINT/2023-24 dated 12/02/2024

CORRIGENDUM / AMENDMENT NO. 2 DATED 02/04/2024e-Tender No.: **019/SAL/MMD-MAINT/2023-24 dated 12/02/2024**MSTC Event No. **BRBNMPL/SALBONI PRESS/MMD/24/23-24/ET/33 [AIR HANDLING UNIT]**e-Tender Name: **DESIGN, SUPPLY, INSTALLATION & TESTING OF 05 NOS. AIR HANDLING UNIT AT BRBNMPL, SALBONI**

The following points of the referred tender are amended as per details given below:

Sl. No.	Description	Details as per Original Tender	Details as per Corrigendum/ Amendment No. 1 dated 15/03/2024	Details as per Corrigendum/ Amendment No. 2 dated 02/04/2024	Reference Page Number of Tender
1.	Date of Sale of e-tender document	From 12/02/2024 to 15/03/2024 at the website www.mstcecommerce.com	From 12/02/2024 to 02/04/2024 at the website www.mstcecommerce.com	From 12/02/2024 to 16/04/2024 at the website www.mstcecommerce.com	3
2.	Closing date and time for receipt of e-tenders	15/03/2024 at 11.00 Hours	02/04/2024 at 11.30 Hours	16/04/2024 at 11.30 Hours	1, 3
3.	Time and date of opening of e-tenders	15/03/2024 at 11.30 Hours	02/04/2024 at 11.31 Hours	16/04/2024 at 11.31 Hours	1, 3
4.	Technical Specifications	Section VII of Original Tender	-	Amended as below in this Corrigendeum**	60 to 69

**** The points / places where changes / revisions have been made, have been highlighted in yellow.****Note:**

- 1. These changes / revisions are applicable at all other places of tender including Page Nos. given above.**
- 2. The evaluation of Bids will be carried out as per revised specifications & amended Bill of Quantity (BOQ) only, care must be taken by the bidder to quote the rates as per revised specifications & amended Bill of Quantity (BOQ) mentioned in this Corrigendum.**
- 3. All other terms and conditions remain unchanged.**

Corrigendum to Section VII (Page Nos. 60 to 69) of the Tender Document**As per Original Tender:****Section VII: Technical Specifications**
Technical Specifications & Scope of work

Bharatiya Reserve Bank Note Mudran Pvt. Ltd., a wholly owned subsidiary of Reserve Bank of India (RBI) situated at Salboni, Paschim Medinipur in State of West Bengal (approx. 150 Km. from Kolkata), intends to procure 5 Nos. of Air Handling Units (AHU) out of Installed 57 Nos. of AHUs and replace the same with existing AHUs (5 Nos. of AHU) at same place as per the details given in this Section. Air Handling Units play a crucial role in maintaining work environment conditions stable to attain consistent production quality.

I. GENERAL REQUIREMENTS :

- a) **Design, Supply, Installation Testing and Commissioning 5 Nos. of Air Handling Unit (AHU) comprising of Cooling Coil, filters, etc in each unit of AHU to maintain the below mentioned conditions throughout the year** as per the specifications, terms and conditions of the tender along with **Incorporating/Integrating** the same with our existing pipe line system of both Supply and Return Duct lines.

Conditions to Maintain: Standard temperature and relative humidity required to be maintained is 23 deg C \pm 1.5 deg C and 55 % \pm 5 % respectively on 24 x 7 basis.

- b) The proposed 5 Nos. of Air Handling Units (AHU) will be installed on the existing foundation of AHUs to be replaced. Proper planning should be ensured to avoid delay in site preparation and installation of supplied AHUs after dismantling / removal of existing AHUs under replacement without hampering the General Working of the Press.
- c) The Bidder should have full-fledged service network in West Bengal (India).
- d) The Offered AHUs should be of latest design for optimal performance and latest date/ batch of the manufacturing. Bidders are required to offer **Single Make and Model** AHU complying to specifications and requirements of the tender.
- e) Bidders are required to submit all technical details of the same for evaluation in Technical Bid (Part – I) and quote for the same Make and Model in Price Bid (Part – II). **Change in Make and Model of AHU** by the bidder either during Bid Evaluation Stage or during Tender Finalisation Stage after opening of the Tender **is not allowed and is liable for rejection of the bid.**
- f) On Finalisation of Tender LOI / Purchase Order will be issued to the successful bidder with the same Make and Model of the AHU, as Offered by the bidder in Technical Bid (Part – I), along with other terms and conditions of the tender. **Change in Make and Model of AHU** during Contract execution after placement of order **is not allowed and liable for cancellation of LOI / Purchase Order.**

II. GENERAL SITE CONDITIONS FOR BIDDER INFORMATION :**a) Ambient Conditions :**

- (i) **Temperature :** DBT (approx.) – {86 Degree F (30 Degree C)};
WBT (approx.) - {82.5 Degree F(28 Degree C)};
- (ii) **Humidity :** (approx.) 166Gr/LB

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b) Existing AHU Dimensions:

- (i) AHU-22:- Length-4.9 mts,Width-3.35mts & Height-2.15mts
- (ii) AHU25A:- Length-4.9 mts,Width-3.35mts & Height-2.15mts
- (iii) AHU-23:- Length-4.9 mts,Width-3.35mts & Height-2.15mts.
- (iv) AHU-24:- Length-4.9 mts, Width-3.35mts & Height-2.15mts
- (v) AHU-25:- Length-4.9 mts, Width-3.35mts & Height-2.15mts

c) Room Dimensions :

- (i) AHU-22&25A :- Total size : Length-110mts, Width-56.5mts & Ceiling Height-8mts approximately for maintaining Temperature & Humidity of 5 Sections.
- (ii) AHU-23:- Total size : Length-78mts, Width-46mts & Ceiling Height-8mts approximately for maintaining Temperature & Humidity of 3 Sections.
- (iii) AHU-24:-Total size: Length-137mts, Width-46mts & Ceiling Height-5mts approximately for maintaining Temperature & Humidity of shopfloor of 4 Sections.
- (iv) AHU-25:- Total size: Length-89mts, Width-44mts & Ceiling Height-3mts approximately for maintaining Temperature & Humidity of Mezzanine Floor of 4 Sections.

d) Existing System:

- (i) Existing Air Conditioning:- Centralized Air conditioning
- (ii) Existing AHUs Capacity:- Each 22500 CFM with 15KW motor
- (iii) Available Ducting:-
Supply Duct - (approx.) 1010mm X 1055mm,
Return Duct - (approx.) 745mm X 3000mm.
- (iv) Chilled Water Temp:- 45 Degree F
- (v) Power Supply:- 415V/3Phase/50Hz

III. TECHNICAL SPECIFICATIONS

a)	General	i.	New AHU Capacity CFM 22500, 65 mm WC static
		ii.	Air Handling Unit (AHU) shall be mounted on existing base/foundation.
b)	System	i.	Each unit shall be complete with centrifugal/plug fan(s) with motor, cooling coil(s), washable filter(s), drain pan, mixing box, return, bypass and volume control damper, flexible connector, flexible electrical wiring, etc.
		ii.	Bypass Factor - 0.015%
c)	Construction	i.	Unit to be of SS Frame construction with pre-fabricated pre-coated double skin welded (panel construction will not be considered) construction, external skin minimum 20 SWG pre-coated, internal skin will be minimum 20 SWG GI.
		ii.	Minimum 50 mm thickness CFC free PUF density 40KG/cm ² insulation has to be provided between two panels for thermal break.
		iii.	Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.

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d)	Drain Pan	i.	1.25 mm SS-304 Drain pan with 19 mm thk close cell nitrile rubber insulation sheet.
e)	Motor and starter	i.	IE-3 Motor shall be totally enclosed, squirrel cage induction type and insulation shall be of class F, IP56/IP55.
		ii.	Power supply shall be 415V/3Ph/50Hz.
		iii.	Motor shall be TEFC, B-5 / B-3 construction.
		iv.	Suitable Star Delta control panel for 20HP three phase motor.
		v.	25 mm thick ArmaSound on fan section
f)	Blower	i.	Fan(s) shall be of V-Belt (neoprene rubber belt) driven type and shall be selected at higher efficiency and acceptable sound level to achieve standard noise level in conditioned space.
		ii.	Process Fan shall be Class 1, arrangement 4, SISW / Plug Type with CWBH discharge. Regeneration Fan will be Class 1, Arrangement 4, SISW Type with CWBH discharge
g)	Cooling Coil	i.	Cooling coil minimum half inch OD Copper tube with 25 Gauge.
		ii.	U-Band copper minimum half inch OD 22 Gauge.
		iii.	Coil test pressure 300 PSI (Pneumatically).
		iv.	Tube plate 1:5 mm thick for both sides including Top & Bottom with GI IS-277 (1992)(Chilled water will be provided at 45°F).
h)	Filter	i.	Pre-Filter should be efficiency being 90% down to 10 Micron particles.
		ii.	High Grade Non-Woven Synthetic UL-900 Listed Class-I.
		iii.	Fine Filter bag should be efficiency being 98% down to 3 Micron EU-7, having static loss -10mm clean, 20mm clog condition.
		iv.	Filter media shall be Thermal bonded high grade Non-Woven Synthetic UL-900 Listed Class-1
i)	Dampers	:	Dampers should be manual opposed blade type with locking quadrants. Damper shaft will be exposed at the quadrants to be notched to indicate position of blades.
j)	Ducting	:	Ducting {dimensions of (supply duct 1010mm X 1055mm) & (Return duct 745mm X 3000mm)} with G.I. sheet of 20 SWG.
			Ducting for connection of units will be of minimum covered by minimum 50 MM THK. Glass wool/nitrile rubber sheet insulation and minimum 22 SWG Aluminum sheet cladding.
k)	Noise Level	:	Noise level 45-50dB at 1.5 meter distance.

IV. BILL OF QUANTITY (BOQ):

The Bill of Quantity BOQ is tentative and is minimum requirement for supplier to provide. Other additional items / service considered necessary to make the proposal **self-contained and complete in all respects** for installation, Commissioning & fulfilling the AHU performance to maintain parameters mentioned in the tender is under the scope of Supplier. **Bidders are required to load the cost in their quote. No extra payment will be done in this regard.**

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Sl.No	Item Description	Unit	Quantity
1	Supply, Installation, Testing & Commissioning of Floor mounted Air handling unit Eurovent certified, comprising of fresh air damper, mixing box, thermal break profile, 45 mm (+-2) PUF panel having density 40 kg per CUM, IE -3 motor , 6 row deep, 12 FPI, double cooling coil (AHRI certified and UL certified) along with belt driven Double inlet - double width centrifugal blower (AMCA certified) with IE-3 , 4 pole squirrel cage induction motor (having efficiency grater or equal to 90 -94 % and drive guard net and neoprene rubber belt. Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.	Nos	5
2	Dismantling of the existing AHU and shifting the scrape to designated place (i.e; General Store area or AC Plant). Tools & Tackle including labour required for the same is under the scope of supplier. No extra payment will be done in this regard.	Nos	5
3	Supply, Installation, Testing & commissioning of 80 mm Dia MS Black ERW pipe (IS:1239) - Class -C, with necessary support, Flanges, Fittings ,fixing & clamping.	Mtr	10
4	Supply , Installation, Testing, Commissioning of 50 MM THK. Glass wool/nitrile rubber insulation having density 80 kg per CUM, K value - 0.034	Mtr	50
5	Supply, Installation, and Commissioning of 22 G aluminium cladding of Suitable Width	Sqmtr	30

V. SCOPE OF WORK :

- The proposed Air Handling Unit(AHU) should be capable to run 24/7 using our existing chilled water supply line.**
- Design, Supply, Installation, Commissioning and Testing of the Air Handling Unit(AHU) with flexible connectors, filters, volume dampers, control panel, all other necessary controls and auxiliaries to maintain temperature and humidity of $23^{\circ} \text{C} \pm 1.5^{\circ} \text{C}$ and $55\% \pm 5\%$ respectively.
- System should be designed in complete with cooling, heating, humidity control and Dehumidification.
- Unloading, lifting, shifting and placement of the system to the designated (roof top area) place are in the scope of the bidder.
- Fabrication & erection of the required MS Pipeline, with existing chilled water pipe line (supply and return) of Dia 80mm with necessary flanges along with thermal insulation of nitrile minimum thickness 50mm number with aluminium cladding, joint lapping etc, are in the scope of the bidder.
- Fabrication & erection of G.I Sheet for Supply and Return Duct of 20SWG for AHU along with thermal insulation of nitrile minimum thickness 50mm number with aluminium cladding, joint lapping etc, are in the scope of the bidder
- Necessary cutting, plumbing works, welding, fabrication of weld mesh, sections, angular structures, primer & enamel painting etc are in the Scope of the Bidder.
- All required civil works like concrete cutting, bedding for the system, plastering, curing, weather coat painting, disposal of generated scrap etc. are in the scope of the bidder.
- Dismantling of old AHUs along with pipe line modification for New AHU. Supply, Installation, and testing of AHUs performance & new pipe lines arrangements from existing pipe line to AHU coils. One coat of anticorrosive redoxide primer and two coat of synthetic enamel paint on pipelines, Glass wool/nitrile insulation to all pipelines with cladding.
- If required the bidder has to remove the existing shed for dismantling purpose of old AHU, after the completion of New AHU installation the shed has to be arranged properly.
- The bidder has to shift disposal of generated scrap of each unit AHU i.e;(Existing AHU and New AHU) to designated place i.e; (General Store area or AC Plant) depends upon the BRBNMPL requirement.

VI. OTHER TERMS AND CONDITIONS:

- a) Installation and Commissioning :** Installation, Commissioning, training and performance testing of the Air Handling Unit (complete) at BRBNMPL site is under Supplier's scope. All required Tools & Tackles, Initial Commissioning spares and consumables (like Lube oil, Filters etc.) required for completion of successful Installation, Commissioning and Final Acceptance Test (FAT) are to be arranged / supplied by the Supplier.

BRBNMPL will provide the schedule for installation of AHU. The Supplier shall have no objection for involving BRBNMPL employees in installation & commissioning or during maintenance activities during warranty period.

Only Single point input for Power supply of Voltage : 3 phase - 415VAC +/- 10% Frequency : 50Hz +/- 3% nearer to machine will be provided by BRBNMPL. The Supplier is required to arrange for connecting these to the system. In case any other specific requirements, the same will be under the scope of the Supplier.

Supplier shall position, install and commission supplied AHU in place of removed AHU at existing foundation at site. Supplier is required to check the existing foundation for suitability and do necessary modification of existing foundation including any minor civil works, if required for installing the supplied AHU. Tools, tackles and labour required for above dis-mantling and installation activities will be under supplier's scope.

- b) Final Acceptance Test (FAT) and Final Acceptance Certificate (FAC) :** On completion of successful installation and commissioning, the Final Acceptance Test (FAT) for the actual performance test shall be taken in the presence of the Supplier's representatives at BRBNMPL, Salboni.

During **Final Acceptance Test (FAT)** BRBNMPL and supplier will jointly conduct the testing of AHU for a period for **fifteen (15) continuous working shifts** fulfilling all the performance parameters as per the specification in the tender. If any parameters are not fulfilled, FAT shall be conducted again after rectification to the satisfaction of BRBNMPL.

During FAT, supplier's personnel shall be stationed at site for review with BRBNMPL.

FAC : Upon satisfactory completion of FAT, BRBNMPL shall issue FAC (Final Acceptance Certificate).

- c) Warranty :** The Supplier should provide **Onsite Warranty** for Each AHU (Equipment, Systems and Administration) for **Two (2) Years** from the date of FAC as per the tender condition. **Performance security will be returned after expiry of Warranty obligations of AHU for which FAC is issued Last.**

In case of any claim arising out of this warranty, BRBNMPL shall notify the same to the Supplier. Upon receipt of such notice, the Supplier shall repair or replace the defective goods or parts thereof, free of cost at BRBNMPL's site. Supplier shall take over the replaced parts/ goods after providing their replacements and no claim, whatsoever, shall lie on BRBNMPL for such replaced parts/ goods thereafter.

Complaints during the warranty period should be attended within 48 hours from the time of writing complaint viz. through e-mail. A penalty of 0.5% (half per cent) of the contract value for the delay in response time beyond specified time as detailed above shall be

recoverable from the Performance/Warranty Guarantee. The maximum penalty for warranty failure will be 5% (Five percent) of the contract value during the whole warranty period. If there is further such delay after reaching this limit, BRBNMPL shall be entitled to encashment of whole of Performance/Warranty Guarantee Bonds.

If the Supplier, having been notified, fails to rectify / replace the defect(s) within a reasonable period, BRBNMPL may proceed to take such remedial action(s) as deemed fit by BRBNMPL, at the risk and expense of the Supplier and without prejudice to other contractual rights and remedies, which BRBNMPL may have against the Supplier.

On site Preventive Maintenance to be done on Quarterly Basic (i.e. 4 times during a Year) during the warranty period is to be done by the supplier. No charges will be paid.

d) Spare and Service Support : The Supplier should provide technical support for the supplied systems and accessories and make available required spares and consumables **for a period of at least 10 years from the date of FAC.**

e) Tool Kit : Standard Tool Kit for with suitable Mechanical / Electrical tools and tackles along with special tools, gauges & jigs for knife & removal/refitting for maintenance of System is to be part of supply. The cost of the same is to be included in your quote. No separate payment will be done in this regard.

f) Documents to be Supplied along with Techno-Commercial Bid (Part - I):

- a) Authorization Certificate of the original manufacturer, if applicable.
- b) GA (General Arrangement) drawing of AHU
- c) Product Catalogue / Manual with specifications of the offered model.
- d) Full technical data in support of "VI: Compliance Statement-Technical"
- e) Guarantee letter to supply spares & service support for a period of 10 years from FAC

g) Documents to be Supplied along with the Machine (on award of contract) :

- a) Warranty Certificate for **Two year onsite Warranty** from FAC
- b) Operation and maintenance manual – 3 copies
Should include start-up instructions, maintenance data, preventive/ scheduled maintenance checklist with schedule, Mechanical & Electrical Drawing, Wiring Diagram, Parts List, controls, accessories and troubleshooting guide

VII. IMPORTANT NOTE TO BIDDERS:

- a) BRBNMPL reserves the right to reject any application without assigning any reasons what so ever & without any intimation on National security considerations or any other ground
- b) It shall be the sole responsibility of the Supplier to ensure safety of all his workers. Supplier shall ensure that all workmen engaged by him use protective equipment as required. Any untoward incident arising out of improper supervision or inadequate safety measures will be the sole responsibility of the Supplier. The Supplier shall conform to all the Labour Laws and shall remain solely responsible for the obligation under the relevant statutory provisions.
- c) BRBNMPL is a security organization and the Govt. of West Bengal declares the premise as Prohibited Area. Hence Supplier has to abide by the security & safety rules of the Company.
- d) Any damages to Company's Assets arising out of negligence, improper handling etc. will be viewed seriously. In such a case, the entire expenditure incurred for rectifying the damage will be borne by the Supplier. Decision of BRBNMPL on the factual position of negligence on the part of contractor's personnel will be final.**

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COMPLIANCE STATEMENT**To be filled, signed & stamped and submitted along with Technical Bid Part -I)****A. TECHNICAL :**

Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
a)	General	i.	New AHU Capacity CFM 22500, 65 mm WC static	Agreed and Accepted	(Bidder to specified)
				AHU Capacity _____	
		ii.	Air Handling Unit (AHU) shall be mounted on existing base/foundation.	Agreed and Accepted	
		iii.	Make and Model (Offer Only Single Make/Model)	Make : _____ Model : _____	
b)	System	i.	Each unit shall be complete with centrifugal/plug fan(s) with motor, cooling coil(s), washable filter(s), drain pan, mixing box, return, bypass and volume control damper, flexible connector, flexible electrical wiring, etc.	Agreed and Accepted	
		ii.	Bypass Factor - 0.015%	Bypass Factor : _____	(Bidder to specified)
c)	Construction	i.	Unit to be of SS Frame construction with pre-fabricated pre-coated double skin welded (panel construction will not be considered) construction, external skin minimum 20 SWG pre-coated, internal skin will be minimum 20 SWG GI.	Agreed and Accepted	
		ii.	Minimum 50 mm thickness CFC free PUF density 40KG/cm ² insulation has to be provided between two panels for thermal break.	Agreed and Accepted	(Bidder to specified)
				Thickness : _____ PUF Density : _____	
iii.	Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.	Agreed and Accepted			
d)	Drain Pan	i.	1.25 mm SS-304 Drain pan with 19 mm thick close cell nitrile rubber insulation sheet.	Agreed and Accepted	(Bidder to specified)
				Pan Thickness : _____ Pan Material : _____ Insulation Thickness : _____	

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Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
e)	Motor and starter	i.	IE-3 Motor shall be totally enclosed, squirrel cage induction type and insulation shall be of class F, IP56/IP55.	Agreed and Accepted	
		ii.	Power supply shall be 415V/3Ph/50Hz.	Agreed and Accepted	
		iii.	Motor shall be TEFC, B-5 / B-3 construction.	Agreed and Accepted	
		iv.	Suitable Star Delta control panel for 20HP Three phase motor.	Agreed and Accepted	
		v.	Min. 25 mm thick ArmaSound on fan section	Agreed and Accepted	
		vi.	Make and Model (Offer Only Single Make/Model)	Make : _____ Model : _____	
f)	Blower	i.	Fan(s) shall be of belt (neoprene rubber belt)/ direct driven type and shall be selected at higher efficiency and acceptable sound level to achieve standard noise level in conditioned space.	Agreed and Accepted	
		ii.	Process Fan shall be Class 1, arrangement 4, SISW / Plug Type with CWBH discharge. Regeneration Fan will be Class 1, Arrangement 4, SISW Type with CWBH discharge	Agreed and Accepted	
g)	Cooling Coil	i.	Cooling coil minimum half inch OD Copper tube with 25 Gauge.	Agreed and Accepted	
		ii.	U-Band copper minimum half inch OD 22 Gauge.	Agreed and Accepted	
		iii.	Coil test pressure 300 PSI (Pneumatically).	Agreed and Accepted	
		iv.	Tube plate 1:5 mm thick for both sides including Top & Bottom with GI IS-277 (1992)	Agreed and Accepted	
h)	Filter	i.	Pre-Filter should be efficiency being 90% down to 10 Micron particles.	Agreed and Accepted	
		ii.	Pre-Filter media should be High Grade Non-Woven Synthetic UL-900 Listed Class-I.	Agreed and Accepted	
		iii.	Fine Filter bag should be efficiency being 98% down to 3 Micron EU-7, having static loss -10mm clean, 20mm clog condition.	Agreed and Accepted	
		iv.	Fine filter media shall be Thermal bonded high grade Non-Woven Synthetic UL-900 Listed Class-1	Agreed and Accepted	
i)	Dampers	:	Dampers should be manual opposed blade type with locking quadrants. Damper shaft will be exposed at the quadrants to be notched to indicate position of blades.	Agreed and Accepted	

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Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
j)	Ducting	:	Ducting {dimensions of (supply duct 1010mm X 1055mm) & (Return duct 745mm X 3000mm)} with G.I. sheet of 20 SWG	Agreed and Accepted	
			Ducting for connection of units will be of minimum covered by minimum 50 MM THK. Glass wool/nitrile rubber sheet insulation and minimum 22 SWG Aluminum sheet cladding.	Agreed and Accepted	
k)	Noise Level	:	Noise level 45-50dB at 1.5 meter distance.	Noise Level _____	(Bidder to specified)

B. SCOPE OF WORK AND OTHER SPECIFICATIONS / REQUIREMENTS COMPLIANCE:

Sl. No.	Parameter	Offered by Bidder	Remarks, if any
1	Incorporating/Integrating the New AHU with our existing pipe line system of both Supply and Return Duct lines including pipe line modification for New AHU.	Agreed and Accepted	
2	Unloading of the AHU at our Stores/ Installation site and Transfer the material and placement of the system to work site is under scope of supplier,	Agreed and Accepted	
3	Any additional items considered necessary to make the proposal self-contained and complete in all respects for installation, Commissioning & fulfilling the AHU performance to maintain parameters mentioned in the tender is under scope of supplier. No extra payment will be done in this regard.	Agreed and Accepted	
4	The New AHU Unit will be installed on the existing foundation of AHU to be replaced. The Supplier is required to check the existing foundation for suitability and do necessary modification of existing foundation including any minor civil works , if required for installing the supplied AHU. All required civil works like concrete cutting, bedding for the system, plastering, curing, weather coat painting is under scope of supplier, No extra payment will be done in this regard.	Agreed and Accepted	
5	Power Supply of 415V+/- 10%, 3Ph, 50Hz AC aforesaid capacity at one point will be provided at the site by BRBNMPL. The bidder to connect the AHU from the provided power source	Agreed and Accepted	
6	Dismantling of the existing AHU and shifting the scrape to designated place (i.e; General Store area or AC Plant). Tools & Tackle including labour required for the same is under scope of supplier. No extra payment will be done in this regard	Agreed and Accepted	

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Sl. No.	Parameter	Offered by Bidder	Remarks, if any
7	Painting of System as mentioned in the Tender	Agreed and Accepted	
8	Inst. & Commissioning as mentioned in the Tender	Agreed and Accepted	
9	FAT and FAC as mentioned in the Tender	Agreed and Accepted	
10	Warranty Clause as mentioned in tender.	Agreed and Accepted	
11	Safety as mentioned in the Tender	Agreed and Accepted	
12	Tool Kit as mentioned in the Tender	Agreed and Accepted	
13	Spare and Service Support as mentioned in the Tender	Agreed and Accepted	
14	Submission of Documents as mentioned in the Tender	Agreed and Accepted	
15	The offered AHU is not a prototype .	YES	
16	The Bidder should have full-fledged service network in West Bengal (India)	YES	

Amended & Shall be read as:

(The points / places where changes / revisions have been made, have been highlighted in yellow)

Section VII: Technical Specifications
Technical Specifications & Scope of work

Bharatiya Reserve Bank Note Mudran Pvt. Ltd., a wholly owned subsidiary of Reserve Bank of India (RBI) situated at Salboni, Paschim Medinipur in State of West Bengal (approx. 150 Km. from Kolkata), intends to **procure 5 Nos. of Air Handling Units (AHU) and replace the same at the same location / place as the existing AHUs (5 Nos. of AHU) as per the details given in this Section (out of existing installed 57 Nos. of AHUs).** Air Handling Units play a crucial role in maintaining work environment conditions stable to attain consistent production quality.

I. GENERAL REQUIREMENTS :

- a) **Design, Supply, Installation Testing and Commissioning 5 Nos. of Air Handling Unit (AHU) comprising of Cooling Coil, filters, etc in each unit of AHU to maintain the below mentioned conditions throughout the year** as per the specifications, terms and conditions of the tender along with **Incorporating/Integrating** the same with our existing pipe line system of both Supply and Return Duct lines.

Conditions to Maintain: Standard temperature and relative humidity required to be maintained is 23 deg C \pm 1.5 deg C and 55 % \pm 5 % respectively on 24 x 7 basis.

- b) The proposed 5 Nos. of Air Handling Units (AHU) will be installed on the existing foundation of AHUs to be replaced. Proper planning should be ensured to avoid delay in site preparation and installation of supplied AHUs after dismantling / removal of existing AHUs under replacement without hampering the General Working of the Press.
- c) The Bidder should have full-fledged service network in West Bengal (India).
- d) The Offered AHUs should be of latest design for optimal performance and latest date/ batch of the manufacturing. Bidders are required to offer **Single Make and Model** AHU complying to specifications and requirements of the tender.
- e) Bidders are required to submit all technical details of the same for evaluation in Technical Bid (Part – I) and quote for the same Make and Model in Price Bid (Part – II). **Change in Make and Model of AHU** by the bidder either during Bid Evaluation Stage or during Tender Finalisation Stage after opening of the Tender **is not allowed and is liable for rejection of the bid.**
- f) On Finalisation of Tender LOI / Purchase Order will be issued to the successful bidder with the same Make and Model of the AHU, as Offered by the bidder in Technical Bid (Part – I), along with other terms and conditions of the tender. **Change in Make and Model of AHU** during Contract execution after placement of order **is not allowed and liable for cancellation of LOI / Purchase Order.**

II. GENERAL SITE CONDITIONS FOR BIDDER INFORMATION :

a) Ambient Conditions :

- (i) **Temperature :** DBT (approx.) – {86 Degree F (30 Degree C)};
WBT (approx.) - {82.5 Degree F(28 Degree C)};
- (ii) **Humidity :** (approx.) 166Grs/LB

BHARATIYA RESERVE BANK NOTE MUDRAN (P) LIMITED

(Wholly owned subsidiary of Reserve Bank of India)

P.O. RBNM, Salboni, Dist. Midnapore (W), West Bengal, Pin Code 721132

Tender Document for Supply, Installation and Testing Of 5 Nos. Air Handling Unit (AHU)**T.E. No. 019/SAL/MMD-MAINT/2023-24 dated 12/02/2024****b) Existing AHU Dimensions:**

- (i) **AHU-22:-** Length-4.9 mts,Width-3.35mts & Height-2.15mts
- (ii) **AHU25A:-** Length-4.9 mts,Width-3.35mts & Height-2.15mts
- (iii) **AHU-23:-** Length-4.9 mts,Width-3.35mts & Height-2.15mts.
- (iv) **AHU-24:-** Length-4.9 mts, Width-3.35mts & Height-2.15mts
- (v) **AHU-25:-** Length-4.9 mts, Width-3.35mts & Height-2.15mts

c) Room Dimensions :

- (i) **AHU-22&25A :-** Total size : Length-110mts, Width-56.5mts & Ceiling Height-8mts approximately for maintaining Temperature & Humidity of 5 Sections.
- (ii) **AHU-23 :-** Total size : Length-78mts, Width-46mts & Ceiling Height-8mts approximately for maintaining Temperature & Humidity of 3 Sections.
- (iii) **AHU-24 :-** Total size: Length-137mts, Width-46mts & Ceiling Height-5mts approximately for maintaining Temperature & Humidity of shopfloor of 4 Sections.
- (iv) **AHU-25 :-** Total size: Length-89mts, Width-44mts & Ceiling Height-3mts approximately for maintaining Temperature & Humidity of Mezzanine Floor of 4 Sections.

d) Existing System:

- (i) Existing Air Conditioning:- Centralized Air conditioning
- (ii) Existing AHUs Capacity:- Each 22500 CFM with 15KW motor
- (iii) Available Ducting:-
Supply Duct - (approx.) 1010mm X 1055mm,
Return Duct - (approx.) 745mm X 3000mm.
- (iv) Chilled Water Temp:- 45 Degree F
- (v) Power Supply:- 415V/3Phase/50Hz

III. TECHNICAL SPECIFICATIONS

a)	General	i.	New AHU Capacity CFM 22500, 65 mm WC static
		ii.	Air Handling Unit (AHU) shall be mounted on existing base/foundation.
b)	System	i.	Each unit shall be complete with centrifugal/plug fan(s) with motor, cooling coil(s), washable filter(s), drain pan, mixing box, return, bypass and volume control damper, flexible connector, flexible electrical wiring, etc.
		ii.	Bypass Factor - 0.015%
c)	Construction	i.	Unit to be of SS Frame construction with pre-fabricated pre-coated double skin welded (panel construction will not be considered) construction, external skin minimum 20 SWG pre-coated, internal skin will be minimum 20 SWG GI.
		ii.	Minimum 50 mm thickness CFC free PUF density 40KG/cm2 insulation has to be provided between two panels for thermal break.
		iii.	Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.

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d)	Drain Pan	i.	1.25 mm SS-304 Drain pan with 19 mm thk close cell nitrile rubber insulation sheet.
e)	Motor and starter	i.	IE-3 Motor shall be totally enclosed, squirrel cage induction type and insulation shall be of class F, IP56/IP55.
		ii.	Power supply shall be 415V/3Ph/50Hz.
		iii.	Motor shall be TEFC, B-5 / B-3 construction.
		iv.	Suitable Star Delta control panel for 20HP three phase motor.
		v.	25 mm thick ArmaSound on fan section
f)	Blower	i.	Fan(s) shall be of V-Belt (neoprene rubber belt) driven type and shall be selected at higher efficiency and acceptable sound level to achieve standard noise level in conditioned space.
		ii.	Process Fan shall be Class 1, arrangement 4, SISW / Plug Type with CWBH discharge. Regeneration Fan will be Class 1, Arrangement 4, SISW Type with CWBH discharge
g)	Cooling Coil	i.	Cooling coil minimum half inch OD Copper tube with 25 Gauge.
		ii.	U-Band copper minimum half inch OD 22 Gauge.
		iii.	Coil test pressure 300 PSI (Pneumatically).
		iv.	Tube plate 1:5 mm thick for both sides including Top & Bottom with GI IS-277 (1992)(Chilled water will be provided at 45°F).
h)	Filter	i.	Pre-Filter should be efficiency being 90% down to 10 Micron particles.
		ii.	High Grade Non-Woven Synthetic UL-900 Listed Class-I.
		iii.	Fine Filter bag should be efficiency being 98% down to 3 Micron EU-7, having static loss -10mm clean, 20mm clog condition.
		iv.	Filter media shall be Thermal bonded high grade Non-Woven Synthetic UL-900 Listed Class-1
i)	Dampers	:	Dampers should be manual opposed blade type with locking quadrants. Damper shaft will be exposed at the quadrants to be notched to indicate position of blades.
j)	Ducting	:	Ducting required. Supply duct 1010mm X 1055mm X 1000mm & Return duct 745mm X 3000mm X 1000mm fabricated using G.I. sheet of 20 SWG.
		:	Ducting for connection of units will be insulated using minimum 50 mm thickness of Glass wool/nitrile rubber sheet and 22 SWG Aluminium sheet cladding.
k)	Noise Level	:	Noise level 45-50dB at 1.5 meter distance.

IV. BILL OF QUANTITY (BOQ):

The **Bill of Quantity (BOQ)** is tentative and is minimum requirement for supplier to provide. Other additional items / service considered necessary to make the proposal **self-contained and complete in all respects** for installation, Commissioning & fulfilling the AHU performance to maintain parameters mentioned in the tender is under the scope of Supplier. **Bidders are required to load the cost in their quote. No extra payment will be done in this regard.**

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Sl.No	Item Description	Unit	Quantity
1	Supply, Installation, Testing & Commissioning of Floor mounted Air handling unit Eurovent certified, comprising of fresh air damper, mixing box, thermal break profile, 45 mm (+-2) PUF panel having density 40 kg per CUM, IE -3 motor , 6 row deep, 12 FPI, double cooling coil (AHRI certified and UL certified) along with belt driven Double inlet - double width centrifugal blower (AMCA certified) with IE-3 , 4 pole squirrel cage induction motor (having efficiency grater or equal to 90 -94 % and drive guard net and neoprene rubber belt. Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.	Nos	5
2	Dismantling of the existing AHU and shifting the scrape to designated place (i.e; General Store area or AC Plant). Tools & Tackle including labour required for the same is under the scope of supplier. No extra payment will be done in this regard.	Nos	5
3	Supply, Installation, Testing & commissioning of 80 mm dia MS Black ERW pipe (IS:1239) - Class -C, with necessary support, Flanges, Fittings ,fixing and clamping, with nitrile rubber insulation & 22 G aluminium cladding	Mtr	10
4	Supply, Installation, Testing, Commissioning of 50 MM THK. Glass wool/nitrile rubber insulation having density 80 kg per CUM, K value - 0.034	Sqmtr	60
5	Supply, Installation and Commissioning of 22 G aluminium cladding	Sqmtr	60

V. SCOPE OF WORK :

- a. **The proposed Air Handling Unit(AHU) should be capable to run 24/7 using our existing chilled water supply line.**
- b. Design, Supply, Installation, Commissioning and Testing of the Air Handling Unit(AHU) with flexible connectors, filters, volume dampers, control panel, all other necessary controls and auxiliaries to maintain temperature and humidity of 23° C ± 1.5° C and 55% ± 5% respectively.
- c. System should be designed in complete with cooling, heating, humidity control and Dehumidification.
- d. Unloading, lifting, shifting and placement of the system to the designated (roof top area) place are in the scope of the bidder.
- e. Fabrication & erection of the required MS Pipeline, with existing chilled water pipe line (supply and return) of Dia 80mm with necessary flanges along with thermal insulation of nitrile minimum thickness 50mm number with aluminium cladding, joint lapping etc, are in the scope of the bidder.
- f. Fabrication & erection of G.I Sheet for Supply and Return Duct of 20SWG for AHU along with thermal insulation of nitrile minimum thickness 50mm number with aluminium cladding, joint lapping etc, are in the scope of the bidder
- g. Necessary cutting, plumbing works, welding, fabrication of weld mesh, sections, angular structures, primer & enamel painting etc are in the Scope of the Bidder.
- h. All required civil works like concrete cutting, bedding for the system, plastering, curing, weather coat painting, disposal of generated scrap etc. are in the scope of the bidder.
- i. Dismantling of old AHUs along with pipe line modification for New AHU. Supply, Installation, and testing of AHUs performance & new pipe lines arrangements from existing pipe line to AHU coils. One coat of anticorrosive redoxide primer and two coat of synthetic enamel paint on pipelines, Glass wool/nitrile insulation to all pipelines with cladding.
- j. If required the bidder has to remove the existing shed for dismantling purpose of old AHU, after the completion of New AHU installation the shed has to be arranged properly.
- k. The bidder has to shift disposal of generated scrap of each unit AHU i.e;(Existing AHU and New AHU) to designated place i.e; (General Store area or AC Plant) depends upon the BRBNMPL requirement.

VI. OTHER TERMS AND CONDITIONS:

- a) **Installation and Commissioning** : Installation, Commissioning, training and performance testing of the Air Handling Unit (complete) at BRBNMPL site is under Supplier's scope. All required Tools & Tackles, Initial Commissioning spares and consumables (like Lube oil, Filters etc.) required for completion of successful Installation, Commissioning and Final Acceptance Test (FAT) are to be arranged / supplied by the Supplier.

BRBNMPL will provide the schedule for installation of AHU. The Supplier shall have no objection for involving BRBNMPL employees in installation & commissioning or during maintenance activities during warranty period.

Only Single point input for Power supply of Voltage : 3 phase - 415VAC +/- 10% Frequency : 50Hz +/- 3% nearer to machine will be provided by BRBNMPL. The Supplier is required to arrange for connecting these to the system. In case any other specific requirements, the same will be under the scope of the Supplier.

Supplier shall position, install and commission supplied AHU in place of removed AHU at existing foundation at site. Supplier is required to check the existing foundation for suitability and do necessary modification of existing foundation including any minor civil works, if required for installing the supplied AHU. Tools, tackles and labour required for above dis-mantling and installation activities will be under supplier's scope.

- b) **Final Acceptance Test (FAT) and Final Acceptance Certificate (FAC)** : On completion of successful installation and commissioning, the Final Acceptance Test (FAT) for the actual performance test shall be taken in the presence of the Supplier's representatives at BRBNMPL, Salboni.

During **Final Acceptance Test (FAT)** BRBNMPL and supplier will jointly conduct the testing of AHU for a period **for fifteen (15) continuous working shifts** fulfilling all the performance parameters as per the specification in the tender. If any parameters are not fulfilled, FAT shall be conducted again after rectification to the satisfaction of BRBNMPL.

During FAT, supplier's personnel shall be stationed at site for review with BRBNMPL.

FAC : Upon satisfactory completion of FAT, BRBNMPL shall issue FAC (Final Acceptance Certificate).

- c) **Warranty** : The Supplier should provide **Onsite Warranty** for Each AHU (Equipment, Systems and Administration) for **Two (2) Years** from the date of FAC as per the tender condition. **Performance security will be returned after expiry of Warranty obligations of AHU for which FAC is issued Last.**

In case of any claim arising out of this warranty, BRBNMPL shall notify the same to the Supplier. Upon receipt of such notice, the Supplier shall repair or replace the defective goods or parts thereof, free of cost at BRBNMPL's site. Supplier shall take over the replaced parts/ goods after providing their replacements and no claim, whatsoever, shall lie on BRBNMPL for such replaced parts/ goods thereafter.

Complaints during the warranty period should be attended within 48 hours from the time of writing complaint viz. through e-mail. A penalty of 0.5% (half per cent) of the contract value for the delay in response time beyond specified time as detailed above shall be

recoverable from the Performance/Warranty Guarantee. The maximum penalty for warranty failure will be 5% (Five percent) of the contract value during the whole warranty period. If there is further such delay after reaching this limit, BRBNMPL shall be entitled to encashment of whole of Performance/Warranty Guarantee Bonds.

If the Supplier, having been notified, fails to rectify / replace the defect(s) within a reasonable period, BRBNMPL may proceed to take such remedial action(s) as deemed fit by BRBNMPL, at the risk and expense of the Supplier and without prejudice to other contractual rights and remedies, which BRBNMPL may have against the Supplier.

On site Preventive Maintenance to be done on Quarterly Basic (i.e. 4 times during a Year) during the warranty period is to be done by the supplier. No charges will be paid.

d) Spare and Service Support : The Supplier should provide technical support for the supplied systems and accessories and make available required spares and consumables **for a period of at least 10 years from the date of FAC.**

e) Tool Kit : Standard Tool Kit for with suitable Mechanical / Electrical tools and tackles along with special tools, gauges & jigs for knife & removal/refitting for maintenance of System is to be part of supply. The cost of the same is to be included in your quote. No separate payment will be done in this regard.

f) Documents to be Supplied along with Techno-Commercial Bid (Part - I):

- a) Authorization Certificate of the original manufacturer, if applicable.
- b) GA (General Arrangement) drawing of AHU
- c) Product Catalogue / Manual with specifications of the offered model.
- d) Full technical data in support of "VI: Compliance Statement-Technical"
- e) Guarantee letter to supply spares & service support for a period of 10 years from FAC

g) Documents to be Supplied along with the Machine (on award of contract) :

- a) Warranty Certificate for **Two year onsite Warranty** from FAC
- b) Operation and maintenance manual – 3 copies
Should include start-up instructions, maintenance data, preventive/ scheduled maintenance checklist with schedule, Mechanical & Electrical Drawing, Wiring Diagram, Parts List, controls, accessories and troubleshooting guide

VII. IMPORTANT NOTE TO BIDDERS:

- a) BRBNMPL reserves the right to reject any application without assigning any reasons what so ever & without any intimation on National security considerations or any other ground
- b) It shall be the sole responsibility of the Supplier to ensure safety of all his workers. Supplier shall ensure that all workmen engaged by him use protective equipment as required. Any untoward incident arising out of improper supervision or inadequate safety measures will be the sole responsibility of the Supplier. The Supplier shall conform to all the Labour Laws and shall remain solely responsible for the obligation under the relevant statutory provisions.
- c) BRBNMPL is a security organization and the Govt. of West Bengal declares the premise as Prohibited Area. Hence Supplier has to abide by the security & safety rules of the Company.
- d) Any damages to Company's Assets arising out of negligence, improper handling etc. will be viewed seriously. In such a case, the entire expenditure incurred for rectifying the damage will be borne by the Supplier. Decision of BRBNMPL on the factual position of negligence on the part of contractor's personnel will be final.**

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T.E. No. 019/SAL/MMD-MAINT/2023-24 dated 12/02/2024

COMPLIANCE STATEMENT**To be filled, signed & stamped and submitted along with Technical Bid Part -I)****A. TECHNICAL :**

Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
a)	General	i.	New AHU Capacity CFM 22500, 65 mm WC static	Agreed and Accepted	
				AHU Capacity _____	(Bidder to specified)
		ii.	Air Handling Unit (AHU) shall be mounted on existing base/foundation.	Agreed and Accepted	
		iii.	Make and Model (Offer Only Single Make/Model)	Make : _____ Model : _____	
b)	System	i.	Each unit shall be complete with centrifugal/plug fan(s) with motor, cooling coil(s), washable filter(s), drain pan, mixing box, return, bypass and volume control damper, flexible connector, flexible electrical wiring, etc.	Agreed and Accepted	
		ii.	Bypass Factor - 0.015%	Bypass Factor : _____	(Bidder to specified)
c)	Construction	i.	Unit to be of SS Frame construction with pre-fabricated pre-coated double skin welded (panel construction will not be considered) construction, external skin minimum 20 SWG pre-coated, internal skin will be minimum 20 SWG GI.	Agreed and Accepted	
		ii.	Minimum 50 mm thickness CFC free PUF density 40KG/cm2 insulation has to be provided between two panels for thermal break.	Agreed and Accepted	
				Thickness : _____ PUF Density : _____	(Bidder to specified)
iii.	Fire reductant quantity double layer canvas cloth should be applied on both Supply and return side connection. Blower should be placed as per the direction of existing duct outlets and inlets.	Agreed and Accepted			
d)	Drain Pan	i.	1.25 mm SS-304 Drain pan with 19 mm thick close cell nitrile rubber insulation sheet.	Agreed and Accepted	
				Pan Thickness : _____ Pan Material : _____ Insulation Thickness : _____	(Bidder to specified)

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Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
e)	Motor and starter	i.	IE-3 Motor shall be totally enclosed, squirrel cage induction type and insulation shall be of class F, IP56/IP55.	Agreed and Accepted	
		ii.	Power supply shall be 415V/3Ph/50Hz.	Agreed and Accepted	
		iii.	Motor shall be TEFC, B-5 / B-3 construction.	Agreed and Accepted	
		iv.	Suitable Star Delta control panel for 20HP Three phase motor.	Agreed and Accepted	
		v.	Min. 25 mm thick ArmaSound on fan section	Agreed and Accepted	
		vi.	Make and Model (Offer Only Single Make/Model)	Make : _____ Model : _____	
f)	Blower	i.	Fan(s) shall be of belt (neoprene rubber belt)/ direct driven type and shall be selected at higher efficiency and acceptable sound level to achieve standard noise level in conditioned space.	Agreed and Accepted	
		ii.	Process Fan shall be Class 1, arrangement 4, SISW / Plug Type with CWBH discharge. Regeneration Fan will be Class 1, Arrangement 4, SISW Type with CWBH discharge	Agreed and Accepted	
g)	Cooling Coil	i.	Cooling coil minimum half inch OD Copper tube with 25 Gauge.	Agreed and Accepted	
		ii.	U-Band copper minimum half inch OD 22 Gauge.	Agreed and Accepted	
		iii.	Coil test pressure 300 PSI (Pneumatically).	Agreed and Accepted	
		iv.	Tube plate 1:5 mm thick for both sides including Top & Bottom with GI IS-277 (1992)	Agreed and Accepted	
h)	Filter	i.	Pre-Filter should be efficiency being 90% down to 10 Micron particles.	Agreed and Accepted	
		ii.	Pre-Filter media should be High Grade Non-Woven Synthetic UL-900 Listed Class-I.	Agreed and Accepted	
		iii.	Fine Filter bag should be efficiency being 98% down to 3 Micron EU-7, having static loss -10mm clean, 20mm clog condition.	Agreed and Accepted	
		iv.	Fine ilter media shall be Thermal bonded high grade Non-Woven Synthetic UL-900 Listed Class-1	Agreed and Accepted	
i)	Dampers	:	Dampers should be manual opposed blade type with locking quadrants. Damper shaft will be exposed at the quadrants to be notched to indicate position of blades.	Agreed and Accepted	

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Sl. No.	Parameter		Minimum requirement as per tender	Offered by Bidder	Remarks, if any
j)	Ducting	:	Ducting required. Supply duct 1010mm X 1055mm X 1000mm & Return duct 745mm X 3000mm X 1000mm fabricated using G.I. sheet of 20 SWG.	Agreed and Accepted	
		:	Ducting for connection of units will be insulated using minimum 50 mm thickness of Glass wool/nitrile rubber sheet and 22 SWG Aluminium sheet cladding.	Agreed and Accepted	
k)	Noise Level	:	Noise level 45-50dB at 1.5 meter distance.	Noise Level _____	(Bidder to specified)

B. SCOPE OF WORK AND OTHER SPECIFICATIONS / REQUIREMENTS COMPLIANCE:

Sl. No.	Parameter	Offered by Bidder	Remarks, if any
1	Incorporating/Integrating the New AHU with our existing pipe line system of both Supply and Return Duct lines including pipe line modification for New AHU.	Agreed and Accepted	
2	Unloading of the AHU at our Stores/ Installation site and Transfer the material and placement of the system to work site is under scope of supplier,	Agreed and Accepted	
3	Any additional items considered necessary to make the proposal self-contained and complete in all respects for installation, Commissioning & fulfilling the AHU performance to maintain parameters mentioned in the tender is under scope of supplier. No extra payment will be done in this regard.	Agreed and Accepted	
4	The New AHU Unit will be installed on the existing foundation of AHU to be replaced. The Supplier is required to check the existing foundation for suitability and do necessary modification of existing foundation including any minor civil works , if required for installing the supplied AHU. All required civil works like concrete cutting, bedding for the system, plastering, curing, weather coat painting is under scope of supplier, No extra payment will be done in this regard.	Agreed and Accepted	
5	Power Supply of 415V+/- 10%, 3Ph, 50Hz AC aforesaid capacity at one point will be provided at the site by BRBNMPL. The bidder to connect the AHU from the provided power source	Agreed and Accepted	
6	Dismantling of the existing AHU and shifting the scrape to designated place (i.e; General Store area or AC Plant). Tools & Tackle including labour required for the same is under scope of supplier. No extra payment will be done in this regard	Agreed and Accepted	

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T.E. No. 019/SAL/MMD-MAINT/2023-24 dated 12/02/2024

Sl. No.	Parameter	Offered by Bidder	Remarks, if any
7	Painting of System as mentioned in the Tender	Agreed and Accepted	
8	Inst. & Commissioning as mentioned in the Tender	Agreed and Accepted	
9	FAT and FAC as mentioned in the Tender	Agreed and Accepted	
10	Warranty Clause as mentioned in tender.	Agreed and Accepted	
11	Safety as mentioned in the Tender	Agreed and Accepted	
12	Tool Kit as mentioned in the Tender	Agreed and Accepted	
13	Spare and Service Support as mentioned in the Tender	Agreed and Accepted	
14	Submission of Documents as mentioned in the Tender	Agreed and Accepted	
15	The offered AHU is not a prototype .	YES	
16	The Bidder should have full-fledged service network in West Bengal (India)	YES	

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T.E. No. 019/SAL/MMD-MAINT/2023-24 dated 12/02/2024

Bidders may please note that Originals (or self-attested copies of Originals) of specified scanned uploaded documents **(except Price Schedule)** must be physically submitted in a sealed cover before the bid submission deadline at mentioned venue as specified in the tender. **Failure to do so is likely to result in the bid being rejected.**

*This Corrigendum / Amendment form a part of the referred Tender. This Corrigendum / Amendment is to be submitted along with Techno-Commercial Bid (Part - I) duly signed and sealed by authorised signatory in a separate envelope superscribed with Corrigendum No. and tender details **(in MSTC Portal along with Physical Submission of Originals)**.*

Bidders who have already participated in this tender can re-participate (if required) as per terms & conditions of the tender.

For & on behalf of BRBNMPL, Salboni

Sd/-

(Amitav Mishra)

Deputy General Manager