

Ref No: AAI/RHQ-SR/ENGG/AGM (E)/WO-05/2022 /22

Date: 11.08.2022

To,

M/s.VOLTAS LIMITED
NO.62A, Anna Salai,
Teynampet,
Chennai - 600 018.

**Name of Work : Replacement of AHUs (Phase-I, 8 Nos) of ATS Complex,
Southern Region, Chennai Airport.**

Sub Head : Replacement of AHUs in Technical Building.

Ref: 1. AAI Tender Id: 2022_AAI_120381_1
2. e-Tender (Price Bid) opened: 20.07.2022

Dear Sirs,

1. Your tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rates quoted by you totaling to **Rs.29,75,416.00** (Rupees Twenty Nine Lakhs Seventy Five Thousand Four Hundred and Sixteen Only) Plus applicable GST @ 18% which is 1.62% below the justified cost of **Rs.30,24,525.00** Plus applicable GST @ 18%.
2. Jt. General Manager Engg (E), AAI, Administrative offices, RHQ-Southern Region, Chennai shall be Engineer - in - charge of the work. You are requested to attend this office by **25.08.2022** to sign and complete the contract agreement. The contract Agreement shall be executed on a non-judicial stamp paper of value Rs.100/- (Rupees One Hundred only). The cost of the stamp paper shall be borne by you.
3. Please deposit **Rs.2,97,542.00** (Rupees Two Lakhs Ninety Seven Thousand Five Hundred and Forty Two only) towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted from your running bills as per the Clause of 1-A of Clauses of Contract.
4. You are requested to comply with the provision of Contract labour (Regulation and Abolition) Act 1970 and contract labour (Regulation and Abolition) Central rules 1971 and minimum wages act and rules thereof Central and State Governments.

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5. You are also directed to contact Asst. General Manager (Engg-E), immediately who will arrange to hand over the site to you.
6. Please note that the time allowed for carrying out the work shall be 06 (Six) Months and same shall be reckoned from **20.08.2022**.
7. Any further correspondence in connection with the contract should normally be addressed to the Jt. General Manager Engg (E), AAI, Administrative Offices, RHQ-Southern Region, Chennai.
8. On completion of work, you are requested to clearly indicate AAI GST No. 33AAACA6412D1ZF in your invoice.
9. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Thanking you,

Encl: 1) Schedule of Quantities – Schedule 'A'

2) E-Sahaj Proforma to be followed for obtaining Airport Entry permit

Yours faithfully,

Asst. General Manager Engg (E)
For and on behalf of the Chairman
Airports Authority of India

आर. सुजाता / R. SUJATHA

सहायक महाप्रबंधक (इंजी.-विद्युत) / Assistant General Manager (Engg.-Electrical)
भारतीय विमानपत्तन प्राधिकरण / Airports Authority of India
प्रचालन कार्यालय कॉम्प्लेक्स / Operational Offices Complex
दक्षिणी क्षेत्र, चेन्नई - 16 / Southern Region, Chennai-16



AIRPORTS AUTHORITY OF INDIA
SOUTHERN REGION
CHENNAI AIRPORT, CHENNAI 600 027

SCHEDULE OF QUANTITY

Schedule-A

Name of Work : Replacement of AHUs (Phase-I, 8 Nos) of ATS Complex, Southern Region, Chennai Airport. SH: Replacement of AHUs in Technical Building.

SI No	Description of Item	Qty		Rate	Amount
1	Dismantling the existing air handling units of following capacity i/c motor, blower, cooling coil, electrical panel, Chilled water pipelines at Inlet & Outlet of AHUs upto 3-way mixing valve, etc with all associated accessories and handing over of all dismantled items to AAI stores, including transportation, etc complete as required.				
1.1	20 TR capacity at Third floor	2	Jobs	15610.00	31,220.00
1.2	30 TR capacity at Second floor & Third floor	2	Jobs	16850.00	33,700.00
2	Supply of factory built floor mounted chilled water double skin type Air Handling Units made of 25mm thick panels consisting pre plasticised G.I casing of thickness 0.8mm outside layer and 0.8mm inside layer with polyurethane foam(PUF) insulation having 38 kg/cu.M density, factory injected between them by injection moulding machine, complete with blower section with Backward curve blower, blower suitable for static pressure as detailed below, PVC drift eliminators, cooling coil section with aluminium finned copper tubes (tube thickness not less than 0.5mm) cooling coil, filter sections with 50mm thick metal viscous /washable synthetic type air pre-filters, belt drive package with TEFC drive motor of efficiency class IE4 suitable for 415 ± 10% volts, 50Hz, 3 phase, AC Supply, suitably designed for variable frequency drive applications, drain connections, stainless steel (18G) drain pan with PUF insulation, LED light with door switch, Provision to install UVGI lamps between cooling coil and blower, PCC cubicals to position the base frame of AHUs, necessary vibration isolation arrangement etc., complete as per specification and of following capacities:				
2.1	a)20 TR Capacity, 10,900CFM b)K.Calorie per hour-60,000 c)C.M Hr.- 18,520 d)Rows deep-4 e)Static pressure -75mmWC f)Filtration standard-90% efficiency down to 10 Microns g) Supply blower - 1 No	2	set	340200.00	6,80,400.00
2.2	a)30 TR Capacity, 16,800CFM b)K.Calorie per hour-90,000 c)C.M Hr.- 28,544 d)Rows deep-4 e)Static pressure -75mmWC f)Filtration standard-90% efficiency down to 10 Microns g) Supply blower - 1 No	2	set	499380.00	9,98,760.00

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SI No	Description of Item	Qty		Rate	Amount
3	Installation, Testing & Commissioning of above air handling units at following locations for successful operation complete as required.				
3.1	20 TR & 10,900 CFM Capacity at Third floor of ATS Complex	2	Jobs	18730.00	37,460.00
3.2	30 TR & 16,800 CFM Capacity at Third floor of ATS Complex	2	Jobs	24970.00	49,940.00
4	The associated works complete to enable the commissioning of AHUs as required as below: a) Necessary modification in the existing GI ducting to made suit the mouth connection with the new AHU including supply & fixing of necessary thermal & acoustic insulation as required b) Necessary modification in the existing MS Chilled water pipeline including supply & fabrication of required new MS 'C' class pipes, drain valve, supports, insulation with PUF sections, vapour barrier, GI wire mesh, sand cement plastering, Coloring, etc between butterfly valves & AHU. c) Necessary modification in the existing drain water piping for trouble free draining of condensate water including fabricating, supplying, fixing a 'U' trap with both side flanges (easy removal for cleaning) at the drain outlet of AHU. d) Termination of existing power cable, earth wires, control cables, etc				
4.1	20 TR & 10,900 CFM Capacity at Third floor of ATS Complex	2	Jobs	89980.00	1,79,960.00
4.2	30 TR & 16,800 CFM Capacity at Third floor of ATS Complex	2	Jobs	93630.00	1,87,260.00
5	Supply, installation, testing and commissioning of variable frequency drive starter panels with Star-Delta bypass facility near the AHUs constructed out of 2mm thick CRCA sheet duly powder coated as per specifications. The panel shall have hinged door with ON-OFF interlocks. The panel shall be complete with incoming MCCB/MCB, suitable connections, LED indicating lamps, Auto Manual switch, remote start / stop contacts, Ammeter with selector switch, Voltmeter with selector switch, necessary provision for Fire Damper controls & BMS controls, providing Connectors for power and control cables, earthing connectors, printed wiring diagram of starter panel, etc. as required complete as per specifications for following capacity AHUs.				
5.1	20 TR & 10,900 CFM Capacity AHU at Third floor of ATS Complex	2	Jobs	76210.00	1,52,420.00
5.2	30 TR & 16,800 CFM Capacity AHU at Third floor of ATS Complex	2	Jobs	88510.00	1,77,020.00
6	Supply of following size butterfly valve wafer type with matching flanges, bolt nuts and insulation for chilled water header pipes in the AHU rooms.				
6.1	100 mm dia	4	Set	3710.00	14,840.00
6.2	65 mm dia	2	Set	2670.00	5,340.00

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SI No	Description of Item	Qty		Rate	Amount
7	Fixing of following size butterfly valves wafer type with matching flanges, bolt nuts, insulation, etc after made cutting in the existing chilled water header pipes of AHU rooms including removal of existing insulation etc complete as required.				
7.1	100 mm dia	4	Jobs	5330.00	21,320.00
7.2	65 mm dia	2	Jobs	3720.00	7,440.00
8	Supply of following size butterfly valve wafer type with matching flanges, bolt nuts and insulation for supply & return chilled water pipes of AHUs.				
8.1	65 mm dia	8	Jobs	2670.00	21,360.00
9	Fixing of following size butterfly valve wafer type with matching flanges, bolt nuts, insulation, etc after made cutting in the existing supply & return chilled water pipes of AHUs including removal of existing insulation etc complete as required.				
9.1	65 mm dia	8	Jobs	3720.00	29,760.00
10	Supply of following size balancing valve with matching flanges and insulation				
10.1	65 mm dia	4	Set	12040.00	48,160.00
11	Fixing of following size balancing valve with matching flanges and insulation				
11.1	65 mm dia	4	Jobs	3230.00	12,920.00
12	Supply of following size MS " Y" Strainer with matching flanges and insulation				
12.1	65 mm dia	4	Set	5670.00	22,680.00
13	Fixing of following size MS " Y" Strainer with matching flanges and insulation				
13.1	65 mm dia	4	Jobs	3230.00	12,920.00
14	Supply of following size 3-way Modulating valve with actuator, matching flanges, insulation. Thermostat with temperature adjustment, necessary wiring for normal working, etc complete as required.				
14.1	65 mm dia	4	Set	32680.00	1,30,720.00
15	ITC of following size 3-way Modulating valve with actuator, matching flanges, insulation. Thermostat with temperature adjustment, necessary wiring for normal working, etc complete as required.				
15.1	65 mm dia	4	Jobs	6120.00	24,480.00

SI No	Description of Item	Qty		Rate	Amount
16	Supply of 25 mm ball valve with MS pipe nipple for AHU Chilled water Header lines	8	Set	1300.00	10,400.00
17	Fixing of 25 mm ball valve with MS pipe nipple for AHU Chilled water Header lines	8	Jobs	920.00	7,360.00
18	Supply of industrial type Thermometer with adopter for AHU chilled water line,etc complete as required.	8	Nos	1040.00	8,320.00
19	Fixing of industrial type Thermometer with adopter for AHU chilled water line,etc complete as required.	8	Jobs	670.00	5,360.00
20	Supply of dial type Pressure gauges having 150mm dia for AHUs including forged ball valves and pipe stem,etc complete as required.	8	Set	1630.00	13,040.00
21	Fixing of dial type Pressure gauges having 150mm dia for AHUs including forged ball valves and pipe stem,etc complete as required.	8	Jobs	670.00	5,360.00
22	Supply of Canvass Connection between AHU & Duct made of fire retardant type cloth etc complete as required.	4	Nos	2250.00	9,000.00
23	Fixing of Canvass Connection between AHU & Duct made of fire retardant type cloth etc complete as required.	4	Jobs	1690.00	6,760.00
24	Supply of Opposed blade G.I Construction box type factory fabricated duct Volume Control Damper made of 18 SWG thick GI Sheet complete with nuts, bolts, screw, linkage, flanges, etc duct lever and quadrants etc complete as required.	3.6	Sqm	6570.00	23,652.00
25	ITC of Opposed blade G.I Construction box type factory fabricated duct Volume Control Damper made of 16 SWG thick GI Sheet complete with nuts, bolts, screw, linkage, flanges, etc duct lever and quadrants etc complete as required.	3.6	Sqm	1690.00	6,084.00
Total amount exlcuding GST Rs.					29,75,416.00
Add: GST @ 18%					5,35,575.00
Total amount i/c GST					35,10,991.00

(Rupees Thirty Five Lakhs Ten Thousand Nine Hundred and Ninety One Only including GST)

Asst.General Manager (Engg-Elect)

आ.प्र.म. (इ.वि.प्र.) / Assistant General Manager (Engg.-Electrical)

सहायक महाप्रबन्धक (इ.वि.प्र.) / Assistant General Manager (Engg.-Electrical)

भारतीय विमानपत्तन प्राधिकरण / Airports Authority of India

प्रचालन कार्यालय कॉम्प्लेक्स / Operational Offices Complex

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