

भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

No: AAM/ENGG/ELECT/AMED-VIII/HVAC/Phase-IV/2025-26/A-19/436

Date: 14.11.2025

//By Speed post / E-Mail//

WORK ORDER

To,

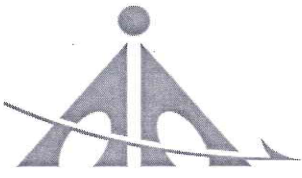
M/s. Voltas Limited,
No.624, Anna Salai,
Teynampet, Chennai – 600 018.

Name of Work: Replacement of AHUs and TFAs of T1 & T4 Terminal Buildings at CIA (Phase-IV)

Ref: 1) e-Tender ID: 2025_AAI_248308_1.
2) Price Bid opened on 15.10.2025.

Dear Sir (s),

1. Your e-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.1,68,68,710.00 (Rupees One Crore Sixty-Eight Lakhs Sixty-Eight Thousand Seven Hundred and Ten Only) excluding GST @ 18%**, which is 31.91 % below the justified cost of Rs. 2,47,72,758.00 (e/c GST).
2. Jt. General Manager (Engg. - Elect.)-I, AMED, AAI, Chennai Airport is the Engineer-in-Charge of the work. You are requested to attend the office of the Jt. General Manager (Engg-Elect)-I, AMED, AAI, Chennai Airport by 01.12.2025 to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value of Rs.100/- (Rupees One Hundred Only) and the cost of the stamp paper shall be borne by you.
3. Please deposit the amount of Rs.16,86,871.00 (Rupees Sixteen Lakh Eighty-Six Thousand Eight Hundred and Seventy-One Only) towards Security deposit within 10 days from the date of issue of this letter failing which the same will be deducted as per conditions of Clause 1A of AAI GCC which shall form part of the Contract Agreement.
4. You are requested to submit an additional performance security for an amount of Rs.18,13,386.00 (i.e. 10.75 % of Rs. 1,68,68,710.00) as per conditions of Clause 1B of AAI GCC within 30 days of issue of this letter.
5. 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.
6. You are also requested to contact Senior Manager (Engg-Elect), AMED-VIII immediately who will arrange for handing over of site.



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

7. Please note that the time allowed for carrying out the work shall be **Eight (08) Months** with effect from 24.11.2025.
8. Any further correspondence in connection with the contract should normally be addressed to the Engineer-in charge.
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.
10. All other terms and conditions shall be as per agreement.

Encl: Schedule of Quantities (04 pages)


14/11/2025

(D. RAJARAM)
Senior Manager (Engg. - Elect.)/ AMED-VIII,
Chennai Airport, Chennai – 600 016,
For and on behalf of the Chairman, AAI.

AIRPORTS AUTHORITY OF INDIA
CHENNAI AIRPORT, CHENNAI-16
SCHEDULE OF QUANTITIES

Name of Work: Replacement of AHUs and TFAs of T1 & T4 Terminal Buildings at CIA (Phase-IV)

Item No.	Description of Items	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Dismantling the existing air handling unit of following capacity i/c motor, connected ducts, blowers, cables, clamps, sensors, terminations and electrical panel with all accessories including shifting and handing over to AAI stores,etc complete as required.				
a)	AHUs of capacity above 30000 CFM upto 45000 CFM	3	Job	28,940.00	86,820.00
b)	AHUs and TFAs of capacity Upto 30000 CFM	7	Job	20,840.00	1,45,880.00
2	Supply of factory built floor mounted chilled water double skin type Air Handling Units made of 43mm thick panels consisting pre coated G.I casing of thickness 0.8mm outside layer and 0.8mm inside layer with polyurethane foam(PUF) insulation factory injected between them by injection moulding machine, 2mm thick base frame at bottom, complete with blower section with Backward curve blower, blower suitable for static pressure as detailed below, mixing chamber for fresh and return air, 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 with outlet pipe dia of min 50mm, stainless steel (18G) drain pan with PUF insulation, 150 mm dia. dial type pressure gauges and industrial type thermometers at the inlet and outlet of coil, 2 nos of access doors on filter and fan section each, with lighting provision in filter and fan sections & limit switches interlocked with doors so that AHU turns off during access door opening, auto purge valve wherever required, necessary vibration isolation arrangement, necessary control cable for all wiring inside the unit etc. and having sufficient space to accommodate UVGI system etc. Complete as per technical specifications and of following capacities & specifications:				
a)	l) 112.5 TR Capacity, 45,000CFM a) Static pressure -80mm WC b) Cooling coil 6 Rows deep c) Filters with Filtration standard-90% efficiency down to 10 Microns d) Supply blowers with motors - 2 Nos e) Two way modulating valve with rotary type actuator-1 nos f) MS Y strainer-100mm dia-1 nos g) 25mm ball valve for inlet and outlet- 2 nos h) 150 mm dia. dial type pressure gauges- 2 nos. i) 150 mm dia industrial type thermometers-2 nos.	3	set	13,00,470.00	39,01,410.00
b)	l) 60 TR Capacity, 24,000CFM a) Static pressure -80mm WC b) Rows deep-6 c) Filters with Filtration standard-90% efficiency down to 10 Microns d) Supply blowers with motors - 1 Nos e) Two way modulating valve with rotary type actuator-1 nos f) MS Y strainer-100mm dia-1 nos g) 25mm ball valve for inlet and outlet- 2 nos h) 150 mm dia. dial type pressure gauges- 2 nos. i) 150 mm dia industrial type thermometers-2 nos.	2	set	8,04,110.00	16,08,220.00
c)	l) 37.5 TR Capacity, 15,000CFM a) Static pressure -80mm WC b) Rows deep-6 c) Filters with Filtration standard-90% efficiency down to 10 Microns d) Supply blowers with motors - 1 Nos e) Two way modulating valve with rotary type actuator-1 nos f) MS Y strainer-100mm dia-1 nos g) 25mm ball valve for inlet and outlet- 2 nos h) 150 mm dia. dial type pressure gauges- 2 nos. i) 150 mm dia industrial type thermometers-2 nos.	1	set	5,24,640.00	5,24,640.00

Item No.	Description of Items	Qty	Unit	Rate (Rs.)	Amount (Rs.)
3	Supply of factory built floor mounted chilled water double skin type Treated fresh air Units made of 43mm thick panels consisting pre coated G.I casing of thickness 0.8mm outside layer and 0.8mm inside layer with polyurethane foam(PUF) insulation factory injected between them by injection moulding machine, 2mm thick base frame at bottom, complete with blower section with Backward curve blower, blower suitable for static pressure as detailed below, mixing chamber for fresh air, PVC drift eliminators, 6 row deep cooling coil section with aluminium finned copper tubes (tube thickness not less than 0.5mm), run around coil with refrigerant and suitable electronic expansion valves and thermostats, 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 with outlet pipe dia of min 50mm, stainless steel (18G) drain pan with PUF insulation, 150 mm dia. dial type pressure gauges and industrial type thermometers at the inlet and outlet of coil, 2 nos of access doors on filter and fan section each, with lighting provision in filter and fan sections & limit switches interlocked with doors so that unit turns off during access door opening, auto purge valve wherever required, necessary vibration isolation arrangement, necessary control cable for all wiring inside the unit etc. and having sufficient space to accommodate UVGI system etc. Complete as per specification and of following capacities & specifications:				
a)	I) 60 TR Capacity, 24,000CFM a) Chilled water Cooling coil 6 Rows deep b) Run around coil with refrigerant 3 rows deep c) Static pressure -80mmWC d) Filtration standard-90% efficiency down to 10 Microns e) Supply blower - 1 No f) Two way modulating valve with rotary type actuator-1 nos g) MS Y strainer-100mm dia-1 nos h) 25mm ball valve for inlet and outlet- 2 nos i) 150 mm dia. dial type pressure gauges- 2 nos. j) 150 mm dia industrial type thermometers-2 nos.	4	Set	14,70,880.00	58,83,520.00
4	Installation, Testing & Commissioning of above AHU and TFA (item 2 & 3) of following capacity at basement of T1 and T4 on floor using necessary concrete blocks/cubes for successful operation complete as required.				
a)	45000 CFM AHU	3	Job	28,940.00	86,820.00
b)	24000 CFM AHU	2	Job	20,840.00	41,680.00
c)	15000 CFM AHU	1	Job	17,360.00	17,360.00
d)	24000 CFM TFAs	4	Job	22,000.00	88,000.00
5	Carrying out all necessary and sufficient modification in the existing MS Chilled water piping to match with existing MS chilled water pipeline including welding, painting complete with all bends, flanges, unions, necessary MS angle/Channel supports etc. along with provision of insulation of pipelines with PUF of suitable size, vapour barrier, chicken mesh net, Aluminium cladding/cement concrete with paint including necessary modifications in drain pipeline including providing additional drain pipeline if required, provision for installation of BMS sensors in pipelines and ducts using suitable accessories, fixing of ball valves with MS pipe nipples in inlet and outlet pipes, dismantling and removing of old MS pipelines etc. complete as required. Old Pipelines from inlet and outlet control valves upto coil shall be replaced with new pipes.				
a)	45000 CFM AHU	3	Job	32,110.00	96,330.00
b)	24000 CFM AHU	2	Job	28,600.00	57,200.00
c)	15000 CFM AHU	1	Job	25,400.00	25,400.00
d)	24000 CFM TFAs	4	Job	28,600.00	1,14,400.00
6	Supply, installation testing commissioning of factory fabricated GSS sheet steel metal round/rectangular ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per specifications of following thickness				
a)	18 gauge	75	Sqm	1,330.00	99,750.00
b)	20 gauge	125	Sqm	1,200.00	1,50,000.00
c)	22 gauge	125	Sqm	1,070.00	1,33,750.00
d)	24 gauge	125	Sqm	940.00	1,17,500.00

Item No.	Description of Items	Qty	Unit	Rate (Rs.)	Amount (Rs.)
7	SITC of XLPE insulation, Class'O', of following thickness on duct, after applying suitable adhesive sealing all joints with self adhesive aluminium tape, including necessary cleaning of duct surface before insulation, complete etc. as per technical specification complete as required				
a)	25 mm thick	450	Sqm	550.00	2,47,500.00
8	Supply and fixing of Canvass Connection made of fire retardant type cloth between AHU & Duct including GI connecting flange etc complete as required.	50	Job	3,470.00	1,73,500.00
9	Supply, installation, testing and commissioning of variable frequency drive starter panels near the AHUs constructed out of 2mm thick CRCA sheet duly powder coated as per specifications and with base frame of suitable height for easy operation. The panel shall have hinged door with ON-OFF interlocks. The panel shall be complete with incoming MCCB/MCB, suitable busbars of aluminium constructions, bus links complete with VFD starter with "ON", "OFF" switches, automatic mode selection switch for each motor, flush mounted LCD operator module with protective cover, Multifunction meter with energy meter for incomer, LED indicating lamps, Auto Manual switch, remote start / stop contacts, earthing connector, panel ventilation fans, including re-connecting existing incomer power cable, connection of control cabling between starter panel and AHU including termination of existing control cables, interconnection of fire damper and fire alarm controls using suitable relays, termination of existing BMS cables in panel, etc. as required complete as per specifications for following.				
a)	45000 CFM AHU Incomer - 1. 100A, 25 kA, 4P MCCB,-1 nos 2. Multifunction meter with energy reading- 1 nos Outgoing - 1. 63A, 4P MCCB, 25kA -2 set 2. 10A 2P MCB 10kA-1 set 2. Suitable capacity Variable Frequency Drive for 45000 CFM capacity AHU- 2 set 3. Potentiometer knob for manual speed control-2 set	3	Job	1,92,720.00	5,78,160.00
b)	24000 CFM AHU/TFA Incomer - 1. 100 A, 25 kA, 4P MCCB,-1 nos 2. Multifunction meter with energy reading- 1 nos Outgoing - 1. 63A, 4P MCCB, 25kA -1 set 2. 10A 2P MCB 10kA-1 set 2. Suitable capacity Variable Frequency Drive for 24000 CFM capacity AHU- 1 set 3. Potentiometer knob for manual speed control-1 set	6	Job	1,27,690.00	7,66,140.00
c)	15000 CFM AHU Incomer - 1. 100 A, 25 kA, 4P MCCB,-1 nos 2. Multifunction meter with energy reading- 1 nos Outgoing - 1. 63A, 4P MCCB, 25kA -1 set 2. 10A 2P MCB 10kA-1 set 2. Suitable capacity Variable Frequency Drive for 15000 CFM capacity AHU- 1 set 3. Potentiometer knob for manual speed control-1 set	1	Job	1,06,220.00	1,06,220.00
10	Supply, installation, testing and commissioning of GI volume control duct damper of thickness 16 SWG frame and 16 SWG vanes complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications.	100	Sqm	5,790.00	5,79,000.00

Item No.	Description of Items	Qty	Unit	Rate (Rs.)	Amount (Rs.)
11	SITC of UVGI lamps suitable for continuous operation having UV-C band having wavelength of 254nm+/-1 nm and sufficient irradiation intensity for germicidal irradiation of the entire AHU cooling coil face area alongwith all supporting structures, power and control panel, cabling, earthing, safety provisions etc as per the detailed technical specifications and complete as required.	60	Sqm	16,190.00	9,71,400.00
12	Supply of following size XLPE PVC outer sheathed aluminium conductor armoured cable of 1.1kv grade as per IS 7098-1. 3 core 16 sqm Al cable	500	Mtr	120.00	60,000.00
13	Laying and fixing of one number of XLPE cable of 1.1 kV grade of following size on existing cable tray or on surface as required. Upto 35 sqmm (clamped with 1mm thick saddles).	500	Mtr	40.00	20,000.00
14	Supply and making end termination with brass compression gland and aluminium lugs for following size of XLPE aluminium cable of 1.1kV grade as required.				
a)	3x16 sqmm (25mm)	26	Each	310.00	8,060.00
b)	3.5x70 sqmm (38mm)	10	Each	480.00	4,800.00
15	Providing and fixing 25mmx5mm copper strip on surface or in recess for earth connections.	25	Mtr	1,180.00	29,500.00
16	Providing and fixing 6 SWG GI wire on surface or in recess for earth connections along with existing cable complete as required.	1000	Mtr	30.00	30,000.00
17	Supply of min capacity 125 litres jumbo desert air coolers suitable for operation on single phase AC supply and shall have low noise, lockable wheels for movement, 3 stage speed control switch, mode control switch, efficient honeycomb cooling pads, min 4500 CFM air capacity, auto louver movement etc. complete as required.	5	Job	23,150.00	1,15,750.00
Total (Excluding GST)					Rs.1,68,68,710.00

(Rupees One Crore Sixty Eight Lakhs Sixty Eight Thousand Seven Hundred and Ten Only)

 14/11/2025

D. RAJARAM
SENIOR MANAGER (ENGG-ELECT)
AMED-VIII, AAI, CHENNAI AIRPORT