

संदर्भ सं. : भाविप्रा/गो/इले/ संमप्र (अभि-वि)/का.आ.- 08/2022-23

दिनांक: 16.06.2022

Ref. No.: AAI/GO/ELE/JGM(E-E)/W.O.-08/2022-23

Date: 16.06.2022

द्रुतगामी डाक द्वारा / By SPEED POST

सेवा मे, To,

M/s. CAC Engineers Pvt. Ltd.,
New No.16, Old No.193,
Thiruvassagam Street,
Gandhi Nagar Main Road,
Ekkattuthangal, Chennai-600032.
Email: cacengineers@yahoo.in
Mob:9884303838

कार्य का नाम: गोवा हवाई अड्डा पर घरेलू और अंतरराष्ट्रीय प्रस्थानों पर वातानुकूलन प्रणाली में सुधार। उपशीर्ष: प्रथम तल पर पूर्व-सुरक्षा जांच क्षेत्र में वातानुकूलन में सुधार का कार्य।

Name of Work: Improvement of Air-conditioning system at Domestic and International Departures. SH: Improvement of Air-conditioning at First Floor Pre Security Check area.

संदर्भ : आपका ई-टेंडर दिनांक 30.05.2022 को खोला गया। टेन्डर आई डी: 2022_भाविप्रा_114256_1

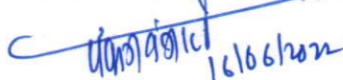
Ref: Your E-tender opened on 30.05.2022 for **Tender ID: 2022_AAI_114256_1**

महोदय/Dear Sir (s),

- 1) उपर उल्लेखित कार्य हेतु आपका ई-टेंडर अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है, आपके द्वारा बताए गये मद मूल्यों पर आपकी टेंडर राशि, कुल रु. **68,24,300/-** (एक्सक्लूडिंग जीएसटी) (रुपये अड़सठ लाख चौबीस हजार तीन सौ मात्र) है, जो कि अनुमानित राशि रु. **89,33,530/-** (एक्सक्लूडिंग जीएसटी), से **23.61%** नीचे है।
- 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.68,24,300/- (excluding GST)** (Rupees Sixty Eight Lakh Twenty Four Thousand Three Hundred Only), which is **23.61% Below** the estimated cost put to tender of **Rs. 89,33,530/- (excluding GST)**.
- 2) सहायक महाप्रबंधक (अभि-वि), भा.वि.प्रा., गोवा एयरपोर्ट इस कार्य के प्रभारी अभियंता होंगे। आपसे निवेदन है कि आप करारनामे पर हस्ताक्षर करने के लिए दिनांक: 05.07.2022 तक सहायक महाप्रबंधक (अभि-वि), भा.वि.प्रा गोवा एयरपोर्ट के कार्यालय में उपस्थित हो तथा करारनामे को पूरा करें। ठेके का करारनामा 100/- रु (रुपये एक सौ मात्र) के नॉनजुडीशियल स्टैम्प पेपर पर निष्पादित किया जाएगा, तथा स्टैम्प पेपर का खर्च आपके द्वारा उठाया जाएगा
- 2) **Assistant General Manager (Engg.-E)**, AAI, Goa Airport shall be the **Engineer-in-charge** of the work. You are requested to attend the office of Assistant General Manager (Engg.-E), AAI, Goa Airport, Goa, by **05.07.2022** 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) and the cost of the stamp paper shall be borne by you.

- 3) कृपया इस पत्रके जारी होने की तिथि से 10 दिनों के भीतर जमानत राशि **रु. 6,82,430/-** (रुपये छह लाख बयासी हजार चार सौ तीस मात्र) जमा करें, अन्यथा ठेके के दास्तावेज के पृष्ठ 16 पर दी गई शर्त 1A के अनुसार काट ली जायेगी।
- 3) Please Deposit **Rs. 6,82,430/-** (Rupees Six Lakh Eighty Two Thousand Four Hundred Thirty Only), towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted as per condition of clause no 1A at page no. 16 of tender document.
- 4) आपसे निवेदन है कि अनुबंध श्रम (विनियम और उन्मूलन) अधिनियम 1970 और ठेका श्रम (विनियमन और उन्मूलन) केंद्रीय नियम 1971 बाल श्रम (निषेध और विनियमन) अधिनियम 1986, निर्माण श्रमिक (रोजगार का नियमन और सेवा की शर्त) अधिनियम 1986, भवन और निर्माण श्रमिक कल्याण उपकरण अधिनियम 1996 के अनुसार निविदा जी सी सी और केंद्रीय और राज्य सरकार के भवन और निर्माण कल्याण उपकरण अधिनियम 1996 के पृष्ठ सं 49 पर खंड 19 में विनिर्दिष्ट है।
- 4) You are requested to comply with the Provisions of Contract Labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971 Child Labour (Prohibition & Regulation) Act 1986, Construction Workers (Regulation of Employment and Condition of Service) Act 1996, Building and other Construction Workers Welfare Cess Act 1996 as specified in Clause 19 on page no 49 of GCC of tender and rules of Central and State Government.
- 5) आपको निर्देश दिया जाता है कि आप तुरंत सहायक प्रबंधक (अभि-वि), भाविप्रा., गोवा एयरपोर्ट से मिले, वह आपको साइट सौंपने की व्यवस्था करेंगे।
- 5) You are also directed to contact **Asst. Manager (Engg-E)**, Airports Authority of India, Goa Airport immediately who will arrange to hand over the site to you.
- 6) कृपया नोट कर लें कि काम करने की अवधि **04 (महा)** है, जो कि कार्य आदेश जारी करने के दसवें (10) दिन से गिना जायेगा।
- 6) Please note that the time allowed for carrying out the work shall be **04 (Four) Months**, which shall be reckoned from 10th day after issue of this order.
- 7) इस ठेके के संबंध में सभी पत्राचार प्रभारी अभियंता, को सम्बोधित किया जाये।
- 7) Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-charge.
- 8) कृपया स्वीकृति के प्रतीक के रूप में इस पत्र के साथ संलग्न दूसरी प्रतिलिपी में हस्ताक्षर करने के बाद अधोहस्ताक्षरी को वापस करें।
- 8) 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.

भवदीय/ Yours faithfully,



सहायक महाप्रबंधक (अभि-वि), / Asst. General Manager (Engg-E)

भा.वि.प्रा., गोवा विमानतल/AAI, Goa Airport.

कृते तथा ओर से, अध्यक्ष, भा.वि.प्रा.,/For and on behalf of Chairman, AAI

संलग्न/Encl: SOQ (Schedules of Quantities) / एस ओ क्यू

SCHEDULE - A

Name of Work: Improvement of Air-conditioning System at Domestic and International Departures.
SH : Improvement of Air- conditioning at First Floor Pre Security Check Area.

Item No.	Description	Qty.	Unit	Rate	Amount
1	Supply of air cooled variable refrigerant flow modular type condensing units, each comprising of multiple scroll compressors all inverter driven, full charge of refrigerant gas (R-410a), lubricating oil and all accessories as per the specifications. The condensing units shall be suitable to work on cooling mode. The minimum Energy Efficiency Ratio shall be as per ASHRAE STANDARDS 90.1 -2001 table 6.2.1B . The COP of the system shall be greater than 4 under ARI conditions for 100% load . The condensing units shall be suitable for operation on 415 $\pm$ 10% volts, 50Hz, 3 phase AC power supply and the condensing units shall be of following capacities: 60HP	2	Set	814300.00	1628600.00
2	Supply of Indoor units generally as specified in technical specification and as shown on drawings. The refrigerant shall be CFC/HCFC free and preferably R410A. The fan shall be of dual suction, aerodynamically designed turbo, multi blade type and statically and dynamically balanced to ensure low noise and vibration free operation. The cooling coil shall be made out of seamless copper types and have continuous aluminium fins. Each coil shall be factory tested at 21kg/sq.m air pressure under water. Each unit shall be provided with wireless LCD type remote controller. The unit shall be ceiling mounted type. Unit shall include pre-filter, fan section and DX-Coil section. Housing of the unit shall be powder coated galvanized steel. Unit shall have 4-way supply air grilles as per the approved drawing. Each unit to be provided with high lift drain pump, fresh air intake provision and low operating sound. Four Way Cassette AC 3.2TR Cassette AC with Wireless remote and refnet branch	30	Nos	44739.00	1342170.00
3	Supply of Central Remote and monitoring panel without touch control having Display of functionality as zone control, malfunction code display, connectable with unified ON/OFF controller, schedule timer and BMS system, Airflow volume and direction can be controlled individually for indoor units in each group operation.	1	Nos	95000.00	95000.00

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Item No.	Description	Qty.	Unit	Rate	Amount
4	Installation, Testing and Commissioning of air cooled variable refrigerant flow modular type condensing units, each comprising of multiple scroll compressors all inverter driven, full charge of refrigerant gas (R-410a), lubricating oil and all accessories as per the specifications. The condensing units shall be suitable to work on cooling mode. The minimum Energy Efficiency Ratio shall be as per ASHRAE STANDARDS 90.1 -2001 table 6.2.1B . The COP of the system shall be greater than 4 under ARI conditions for 100% load . The condensing units shall be suitable for operation on $415 \pm 10\%$ volts, 50Hz, 3 phase AC power supply and the condensing units shall be of following capacities: 60HP	2	Set	60000.00	120000.00
5	Installation, testing and Commissioning of Indoor units generally as specified in technical specification and as shown on drawings. The refrigerant shall be CFC/HCFCfree and preferably R410A. The fan shall be of dual suction, aerodynamically designed turbo, multi blade type and statically and dynamically balanced to ensure low noise and vibration free operation. The cooling coil shall be made out of seamless copper types and have continuous aluminium fins. Each coil shall be factory tested at 21kg/sq.m air pressure under water. Each unit shall be provided with wireless LCD type remote controller. The unit shall be ceiling mounted type. Unit shall include pre-filter, fan section and DX-Coil section. Housing of the unit shall be powder coated galvanized steel. Unit shall have 4-way supply air grilles as per the approved drawing. Each unit to be provided with high lift drain pump, fresh air intake provision and low operating sound. 4Way Cassette AC 3.2TR Cassette AC with Wireless remote and refnet branch	30	Nos	1500.00	45000.00
6	Installation, Testing and Commissioning of Central Remote control and monitoring panel without touch control having Display of functionality as zone control, malfunction code display, connectible with unified ON/OFF controller, schedule timer and BMS system, Airflow volume and direction can be controlled indivisually for indoor units in each group operation.	1	Nos	500.00	500.00

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Item No.	Description	Qty.	Unit	Rate	Amount
7	Supply, Installation, testing and commissioning of Refrigerant piping with CFC/HCFC free and insulated with 13mm/19mm thick sleeve made out of closed cell elastomeric nitrile rubber foam insulation of fire retardant 'O' class. The unit shall come with initial charge of referred refrigerant from the factory. The refrigerant piping interconnecting IDU and ODU shall be hard copper tube, in brazed construction. The thickness of copper piping shall be provided as specified in the technical specifications.				
7.1	Piping with O.D. 9.5	200	Rmt	320.00	64000.00
7.2	Piping with O.D. 12.7	20	Rmt	420.00	8400.00
7.3	Piping with O.D. 15.9	150	Rmt	687.00	103050.00
7.4	Piping with O.D. 19.1	100	Rmt	700.00	70000.00
7.5	Piping with O.D. 22.2	80	Rmt	800.00	64000.00
7.6	Piping with O.D. 28.6	50	Rmt	1235.00	61750.00
7.7	Piping with O.D. 34.9	40	Rmt	1791.00	71640.00
7.8	Piping with O.D. 41.3	80	Rmt	1950.00	156000.00
8	Supply, Installation, Testing and Commissioning of Communication Control cables between indoor unit and outdoor unit laid and clamped 2 Core 1.5 Sqmm in PVC Conduit.	800	Rmt	120.00	96000.00
9	Supply, installation, testing & commissioning of following sizes insulated rigid heavy duty grade UPVC drain pipes of 10kg/sq.cm from indoor units to nearest floor drain and complete with interconnection, flanges, elbows, tees, nuts, P-trap, U trap etc. The insulation shall be provided for the drain pipes with 6 mm thick closed cell elastomeric nitrile rubber with density not less than 8kg/m3.				
9.1	32mm Dia UPVC Drain pipe	60	Rmt	150.00	9000.00
9.2	40mm Dia UPVC Drain pipe	100	Rmt	175.00	17500.00
9.3	50mm Dia UPVC Drain pipe	100	Rmt	195.00	19500.00
10	Unloading, Lifting Shifting charges of all indoors, outdoors as per approval of Engineer-In-Charge.	1	Lot	500.00	500.00
11	Supply and fixing of MS Outdoor Unit Stand	6	Nos	7500.00	45000.00
12	Gas Charging of the whole system	1	Lot	54000.00	54000.00

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Item No.	Description	Qty.	Unit	Rate	Amount
	SH 2 : Electrical Works				
13	VRF Feeder Panel - VRF Feeder Panel - Supply, Installation, Testing & Commissioning , Indoor type cubicle panel, body made out of 2mm thick CRCA sheet, totally enclosed, IP 42, floor/wall mounted with channel base frame, dust and vermin proof, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including control wiring with 2.5 sq mm size wires/cable, interconnection, duly powder coated painting etc. including supply & installation of following switchgears, metering instruments and accessories as per following specifications:- INCOMER : 2 Nos. 250A four pole Module case Circuit Breaker (Ics = Icu = 50 KA) with built in thermal based release unit with adjustable setting. BUSCOUPLER : 1 Nos. 250A four pole Module case Circuit Breaker (Ics = Icu = 50 KA) with built in thermal based release unit with adjustable setting. OUTGOINGS:- 8 Nos. 63A four pole Module case Circuit Breaker(Ics = Icu = 30 KA) with built in thermal based release unit with adjustable setting. INSTRUMENTS: 2 Nos. digital multifunction meter (Ammeter + Voltmeter) including suitable rating CTs for 3 phase, 4 wire operation as per specification. INDICATIONS : RYB (LED Type) phase indicating lamps controlled by 2 amp MCB for all incomer & ON /OFF indication for all Incomers and Outgoings. BUSBAR : 400 Amp TPN Aluminium busbar. All Incomers and Bus Coupler shall be mechanically and electrically interlocked with suitable accessories.	1	Each	345000.00	345000.00
14	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, IP 43, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted etc. as required. (But without MCB/RCCB/Isolator)				
	8 Way Double Door(8+24)	2	Each	15000.00	30000.00
15	Supplying and fixing 63 amps rating, 415 volts, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.	2	Each	5500.00	11000.00
16	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 100 milli amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63A	8	Each	6500.00	52000.00
17	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Single Pole	30.00	Each	2500.00	75000.00

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Item No.	Description	Qty.	Unit	Rate	Amount
18	Supply of following 1.1KV grade aluminium/copper conductor XLPE/PVC insulated PVC sheathed armoured cable as per IS 7098 (Part I) 1988 as required.				
18	3.5c x 185 sq.mm. Aluminium armoured cable	600	Mtr	1177.00	706200.00
18	3.5c x 35 sq.mm. Aluminium armoured cable	700	Mtr	291.50	204050.00
18	3c x 2.5 sq.mm. Copper armoured cable	2600	Mtr	134.40	349440.00
19	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on Cable Tray as required. Above 95 sq mm and up to 185 Sq.mm (clamped with 25/40x3mm MS flat clamp)	600	Mtr	50.00	30000.00
20	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Upto 35 Sqmm (clamped with 1mm thick saddle)	3200	Mtr	45.00	144000.00
21	Supply and making end termination with double compressionn brass cable gland and aluminium/copper lugs as per cable for following size XLPE insulated PVC sheathed aluminium/copper conductor cable of 1.1 KV grade complete as required. 3.5C x 185 Sq.mm Aluminium(57mm OD)	4	Set	5000.00	20000.00
22	Supply and making end termination with double compressionn brass cable gland and aluminium/copper lugs as per cable for following size XLPE insulated PVC sheathed aluminium/copper conductor cable of 1.1 KV grade complete as required. 3.5C x 35 Sq.mm Aluminium (32mm OD)	16	Set	3500.00	56000.00
23	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	1200	Metre	100.00	120000.00
24	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	1400	Metre	50.00	70000.00
25	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray. cable tray with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required. 450 mm width X 50 mm depth X 2.0 mm thickness	400	Metre	900.00	360000.00
26	Supplying and installing following size of perforated Hot Dipped Galvanised Iron Covered cable tray. Cable Tray with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required. 450 mm width X 50 mm depth X 2.0 mm thickness (With Cover)	150	Metre	900.00	135000.00

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Item No.	Description	Qty.	Unit	Rate	Amount
27	Supplying and fixing Thermoplastic, IP65, Weatherproof, Corrosion free, Halogen and Silicon free, UV resistance, Insulated and Shock proof, High impact strength, Flame retardant and Self Extinguishing DB as per approval of Engineer In Charge, Outdoor/Wall Mounting, bottom cable Entry with Metric Knock out distribution Board with PE-N Terminals. Description As per below:- 1 Row – 4.5 Module Hensel Model KV Cat No – KV 7104 M or Equivalent	6	Each	7500.00	45000.00
Total					6824300.00
Say Rs.					6824300.00

(Rupees: Sixty Eight Lakh Twenty Four Thousand Three Hundred Only)


16/06/2022

Asst. Gen. Manager (Engg-E)
AAI, Goa International Airport, Goa