

PROPOSED AIR CONDITIONING WORKS FOR GOLDEN JUBILEE AUDITORIUM, CANARA BANAK, H.O ANNEXE, MANIPAL.

| SL No | DESCRIPTION | UNIT | QTY | RATE | AMOUNT |
|-------|--|------|-------|------|--------|
| | PART A: SUPPLY OF EQUIPMENTS | | | | |
| 1 | Supply of DX CDU's - R410a refrigerant | | | | |
| | Supply of Fixed Scroll Condensing Units with R410a refrigerant which shall operate on 415V, 50Hz supply. The unit comprises copper condenser coil with aluminum fins, condenser fan, fixed scroll compressor which shall operate at an ambeint of 43 Deg C, suitable control mechanism with incomer voltage scanner/isolater, with refrigerant shutoff/recovery valves, mounted on GI base frame along with powder coated cage/structure supplied with factory filled refrigerant complete - Capacity 8.0 TR | Nos | 13.00 | | |
| | Make - Carrier/ Midea / Daikin / Mitsubhishi / York (Direct supply from OEM) | | | | |
| | Total Amount | | | | |
| | CGST @ 14.0 % | | | | |
| | SGST @ 14.0 % | | | | |
| | Net Total Amount for Supply of Air Conditioners. | | | | |
| | PART B: INSTALLATION WORKS | | | | |
| | Installation of DX Units | | | | |
| 1 | 8.0 TR Condensing units with suitable supports made out of painted MS structure duly positioned over vibration pads made out of hard nitrile rubber with all weather screws complete | Nos | 13.00 | | |
| 2 | Supply and installation of DX AHU - 40 TR, 16000 CFM, 40 sft of coil surface area, 65mm TSP double skin construction with thermal break AHU with 6 row deep 8.0 TR x 5 CKT Interwind coil, Filter section with MERV 8 & MERV13 filters,Fan Section with Centrifugal fan, Backward Curve, Drive IE3 motor floor mounted outdoor type horizontal AHU with return and fresh air mixing box complete Make: Urjas Airtech/Edgetech/SystemAir/VTS/Vahyann /Luftek | Nos | 2.00 | | |
| 3 | Supply and installation of DX AHU - 16 TR, 6400 CFM, 16 sft of coil surface area, 65mm TSP double skin construction with thermal break AHU with 6 row deep 8.0 TR x 2 CKT Interwind coil, Filter section with MERV 8 & MERV13 filters,Fan Section with Centrifugal fan, Backward Curve, Drive IE3 motor floor mounted outdoor type horizontal AHU with return and fresh air mixing box complete Make: Urjas Airtech/Edgetech/SystemAir/VTS/Vahyann/Luftek | Nos | 1.00 | | |

| | | | | | |
|----|---|-----|--------|--|--|
| 4 | Supply and installation of DX AHU - 8.0 TR, 3400 CFM, 8 sft of coil surface area, 65mm TSP double skin construction with thermal break AHU with 6 row deep 8.0 TR x 1 CKT Interwind coil, Filter section with MERV 8 & MERV13 filters, Fan Section with Centrifugal fan, Backward Curve, Drive IE3 motor floor mounted outdoor type horizontal AHU with return and fresh air mixing box complete. Make Urjas Airtech/Edgetech/SystemAir/VTS/Vahyann | Nos | 1.00 | | |
| 5 | Design, supply, installation, testing and commissioning of control panel for AHU. The Panel should consist of Incomer MCCB, Contactors, DOL/Star-Delta starters, Relays, Push button (On/Off/Reset), Indicating Lamps (Start/Stop/Trip) etc. with necessary instrument cooling fan, inlet louvers & Filters, necessary relays & contactor, interlocks etc. for AHU motors - Make - Custom make with prior approval | | | | |
| a | 7.5 Kw | Nos | 2.00 | | |
| b | 3.7 kw | Nos | 1.00 | | |
| c | 1.5 kw | Nos | 1.00 | | |
| 6 | Suitable VFD for above AHU's - Make ABB/Danfoss | | | | |
| a | 7.5 Kw | Nos | 2.00 | | |
| b | 3.7 kw | Nos | 1.00 | | |
| c | 1.5 kw | Nos | 1.00 | | |
| 7 | Expansion valves and remote set - Make Danfoss/Carrier/Totaline | Set | 13.00 | | |
| 8 | Refrigerant piping, interconnecting the liquid and suction lines between the aircooled outdoor units and the indoor units. The piping shall be carried out of Hard/Soft drawn copper pipes with soldered / brazed socket fittings. Pipes shall be insulated with 19mm/13mm thick closed cell nitrile rubber insulation and dually covered with UV protection tape. Piping should be carried out over covered powder coated cable tray for long life. Make: Uniflow/Mandev/Totaline/Mexflow | | | | |
| a | 28.6 mm with 19 mm thick tubular insulation | Rmt | 200.00 | | |
| b | 15.9 mm with 13 mm thick tubular insulation (Soft) | Rmt | 200.00 | | |
| 9 | DRAIN PIPING | | | | |
| | Supply and installation of Grey PVC drain pipe insulated with 9mm nitrile rubber insulation including elbows, connectors, U traps, Y-connections and flexible tubing for all indoor units to the nearest toilet drain /pantry drain/ HVAC shaft available as per site conditions | | | | |
| a | 40 mm dia | Rmt | 50.00 | | |
| b | 50 mm dia | Rmt | 25.00 | | |
| 10 | Additional refrigerant gas charging R410a - Make Honeywell/Dupont | Kgs | 53.00 | | |
| 11 | Supply, installation of flexible canvas connection piece between the Air handling units and the GI ducting system | Nos | 4.00 | | |

| | | | | | |
|----|--|-----|--------|--|--|
| 12 | Supply, installation, testing and commissioning of CNC machine made GSS ducting with flanges, neoprene gaskets, factory made supports - for the deteriorated ducts only - Make Camduct/KanvaCool/Zeeco/Rolastar/Devduct | | | | |
| a | 24G | Sqm | 50.00 | | |
| b | 22G | Sqm | 100.00 | | |
| c | 20G | Sqm | 150.00 | | |
| 13 | Supply, installation, testing and commissioning of 10mm thick acoustic insulation of ducting with Class 0 open cell nitrile rubber of of NC rating 32 DbA . Make: K-flex/Superlon/Supreme | Sqm | 150.00 | | |
| 14 | Supply and installation of thermal insulation for ducts with 13 mm thick nitrile rubber sheets with synthetic rubber gum including insulation of flange joints -Make: K-flex/Superlon/Supreme - for the deteriorated ducts only if required | Sqm | 50.00 | | |
| 15 | Supply, installation, testing and commissioning of weather proof insulation of the exposed ducts using 50 mm thick 20KG density EPS sheets and two coats of FRP along with Fevicol Ductlag (AF5590) and two coats of enamel painting. - deteriorated ducts which are exposed | Sqm | 240.00 | | |
| 16 | Supply, installation, testing and commissioning of FRP Insulation for exposed duct by 2 layers of 5mil FRP clothing - using Fevicol ductlag (AF5590) for the remaining/existing ducts. | Sqm | 300.00 | | |
| 17 | FIRE DAMPER | | | | |
| | Supply, Installation, Testing and Commissioning of Fire Control Damper suitable for Fusible link operation made out of 1.6 mm GSS with limit switch. The damper shall be certified for 90 min Fire rating. CBRI tested as per UL-555 | | | | |
| a | Fire Dampers | Sqm | 4.00 | | |
| b | Fusible link | Nos | 4.00 | | |
| 18 | Supply, installation, testing and commissioning of Alluminium volume control dampers with PVC gear and opposed blades. Make: Camduct/kanvacool/JaydeeUtility/Airmaster/Synchro/Balaji | | | | |
| | Rate per sq.mt of face area | Sqm | 4.00 | | |
| 19 | Supply, installation, testing and commissioning of G.I collar dampers with opposed blades as follows. Make: Caryaire/ Ravistar/SystemAir/Synchro/Airflow/Balaji | | | | |
| | Rate per sq.mt of face area (min measurement of 0.1 sq mt) | Sqm | 8.00 | | |
| 20 | Supply, installation, testing and commissioning of Air terminals - Additional if required, to be quoted rate only Make: Caryaire/ Ravistar/SystemAir/Synchro/Airflow/Balaji | | | | |

| | | | | | |
|---|--|-----|---------|--|--|
| | Aluminium powder coated continuous SA/RA grilles with 0/15 deg. Deflection | Sqm | 5.00 | | |
| 21 | Supply and installation Aluminium powder coated Supply air diffuser with damper of 600x600outer size with 450 x 450mm/300x300mm neck size - Additional if required Make : SystemAir/Airmaster/Synchro/Airflow/Jaydee/Balaji | Nos | 20.00 | | |
| 22 | 6Cx1.5 sqmm shielded communication cable between CDU & IDU Make: Polycab/RRCables/Finolex/Vgaurd/Havells | Rmt | 600.00 | | |
| 23 | GI Powder costed covered cable tray - Custom make with prior approval | | | | |
| a | 450 mm wide | Rmt | 100.00 | | |
| b | 300 mm wide | Rmt | 80.00 | | |
| 24 | Charges for Logistics and labour transportation during course of execution, Charges for Lifting, Shifting, of AH units from ground to existing AHU area/location, Charges for Lifting, Shifting, of outdoor units from ground to existing CDU area/location, Charges for Lifting, Shifting, Transportation towards GI ducts and its ancillaries from Factory to Site | Lot | 1.00 | | |
| 25 | Civil coordination, dismantling of the existing old AC units/AHU's and shifting the same to nearest location inside the premises, supervision and dearness during the course of operation/execution | Lot | 1.00 | | |
| 26 | MS structural works pertaining to the AC lowside works as per the site ocnditions | Kgs | 1000.00 | | |
| Total Amount for Installation of Air Conditioners. | | | | | |
| CGST @ 9.0 % | | | | | |
| SGST @ 9.0 % | | | | | |
| Net Total Amount for Installation of Air Conditioners. | | | | | |
| Total Amount for Air Conditioning Works: | | | | | |
| Rounded Off | | | | | |
| IN WORDS | | | | | |
| Kindly note : | | | | | |
| 1 | The Contractor shall inspect the site and understand the scope of work involved before quoting the unit rate. | | | | |
| 2 | Refer approved makes list for material brands | | | | |