

**PROPOSED AIR-CONDITIONING WORKS FOR INDIAN OVERSEAS BANK -KANNAMANGALAM  
BRANCH**

| S.No | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Qty  | Unit | Rate (Rs.) | Amount (Rs.) |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------------|--------------|
|      | <b>Rate Should be inclusive all civil related to the A/c works as per the site conditions at all times. Core cutting, Scaffolding should be inclusive of all items at all levels.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |            |              |
|      | Copper Pipe - Total line, mandev, Rajco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |      |            |              |
|      | Copper Pipe Insulation - Armacell, K flex, Armaflex, Supreme, RR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |            |              |
|      | Drain Pipe - Finolex, Prince, Truebore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |            |              |
|      | Cables (power) - Finolex/ Polycab / RR-Kabeel, Orbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |            |              |
|      | Cables (control) - Finolex/ Polycab / RR-Kabeel, Orbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |            |              |
|      | Voltage stabilizers – Make: Microtex EM4150+ (150V-280v)/ V-Guard VG 400/ Premier.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |            |              |
| 1    | "Supply of Cassette / Hi-wall Split Air-conditioners having Inverter Technology and R410A / R32 refrigerant. - Indoor unit (IDU) comprising copper cooling coil, evaporator fan with motor, filters, insulated drain pan, indicators for temperature & mode, remote control with display, automated drain pump (for cassette), etc. complete set as per the design of OEM. - Outdoor unit (ODU) comprising of compressor, copper condenser coil with fan & motor, interconnecting refrigeration piping, starters, controls, cutouts, relays etc., complete set mounted inside a powder coated sheet metal cabinet as per the design of OEM and duly treated for corrosion protection. Makes: Mitsubishi / Hitachi / Daikin / Voltas / Bluestar |      |      |            |              |
| i    | 1.0 TR Hi-wall Split type AC rated with 5 star and having 100% copper coil (BM-1, ATM-2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3.00 | Nos  |            |              |
| i    | 1.5 TR Hi-wall Split type AC rated with 5 star and having 100% copper coil (Hall)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      | Nos  |            |              |
| ii   | 2.0 TR Casette type AC Four way                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.00 | Nos  |            |              |
|      | <b>PART - B</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |            |              |
| 2    | "Installation Charges: Installation, Testing & Commissioning of above supplied Inverter air-conditioners (IDU & ODU) as per the installation standards of the OEM. The rate shall include cost of transportation, shifting, hoisting, mounting on the wall / floor bracket, first fill of refrigerent considering the entire length of the pipe, neccessary civil works, vaccumising, pressure testing, isolation rubber pads, etc. complete. The work shall be carried out in all aspects as required by the Bank & OEM.                                                                                                                                                                                                                      |      |      |            |              |
| i    | 2.0 TR / 1.5TR Casette type AC rated with 3 star and having 100% copper coil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3.00 | Nos  |            |              |
|      | 1.0 TR Hi-wall Split type AC rated with 5 star and having 100% copper coil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3.00 | Nos  |            |              |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |            |              |

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|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------------|--------------|
| 3    | Refrigerant pipe for Cassette AC & Hi-wall Split AC: S I T C of copper pipes for delivery & return of refrigerant from IDU to ODU as per the size and specifications of the OEM. The pipe should be insulated with 13mm thick nitrile rubber insulation, joint to be sealed 3mm thick black tape and exposed pipe to be covered with vapor barrier, supported by split clamps at frequent interval as per standard installation practices and with complete set of accessories. The refrigerant pipes shall be properly supported and anchored to the ceiling using anchor bolts, threaded rods, brackets, supports, angle frames, etc. The workmanship for the piping shall be carried out as per the recommended practice of the OEM. The piping to be vacuum tested and leak tested. Scope includes The rate shall include all necessary cost towards, supports, hardwares, necessary civil work, etc. The work shall be carried out in all aspects as required by the Bank. For Hi-wall split units Measurement will be after standard length of 3mtr only. (1Mtr of refrigerant piping = 1 Mtr of delivery line + 1 Mtr of return line) Copper pipe makes : Total line / Mandev / Rajco; Copper Pipe Insulation makes : Armacell / K-flex / A-flex / Armaflex | 20.00 | Rm   |            |              |
| 4    | Drain Pipe: Supply, installation, testing and commissioning 25mm / 32mm dia. ISI make PVC drain piping (4Kg/Sq.cm) with 9mm thickness nitrile rubber insulation , U-Trap with flushing system to be provided ,support at frequent interval as per standards with complete set of accessories. The drain pipes should be terminated in the nearby rain water harvesting pits or in the earth pits. The work shall be carried out in all aspects as required by the Bank & OEM. Drain pipe makes : Finolex / Prince / Truebore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20.00 | Rmt  |            |              |
| 5    | PVC Cover Pipe: Supply, installation, testing and commissioning ISI make 100mm dia. PVC pipe for covering the refrigerant pipes externally. This pipe shall be routed from external wall till outdoor unit. The pipe should be supported at frequent interval as per standards with complete set of accessories. The work shall be carried out in all aspects as required by the Bank & OEM. PVC pipe makes : Finolex / Prince / Truebore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10.00 | Rm   |            |              |
| 5    | Control Cable: Supply & laying of flexible copper control cable in 25 mm dia. 2 mm thick rigid PVC conduit pipe complete with complete set of accessories from outdoor unit to indoor units. The power wiring to the compressor motor , condenser fans/ evaporator fan and the control wiring shall be with suitable rated copper conductors as per the directions of OEM. The work shall be carried out in all aspects as required by the Bank & OEM. Cable makes : Polycab / RR-Kabel / Havells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 25.00 | Rm   |            |              |
| 6    | <b>"Voltage Stabiliser: Supply, installation, testing and commissioning of ISI marked Double booster stabilizers for AC units. Makes: Everest / Microtec / V-Guard / Premier</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |      |            |              |
| ii   | 5Kva Stabilizer for 2.0 TR Cassette AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3.00  | Nos  |            |              |
| i    | " 4Kva Stabilizer for 1.0 TR Cassette AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.00  | Nos  |            |              |

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| 7    | Brackets & Angle frames for Mounting Outdoor Unit:<br>"Supply & Installation of heavy duty MS powder coated support brackets for mounting the outdoor units. The work shall be carried out in all aspects as required by the Bank & OEM. (1 set = 2 brackets) NOTE: The outdoor unit shall not be placed over sunshade or the roof.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6.00 | Nos  |            |              |
|      | <p>NOTES :</p> <p>a) The contractors shall use only the specified materials as mentioned above and shall submit the list along with the drawings before starting the work at site.</p> <p>b) All the materials shall be as per the latest IS standards.</p> <p>c) In case of non-availability of any material, approval of the Bank's Engineer must be obtained before using any other material and the approval is subject to adjustment of the cost of the material.</p> <p>d) Before placing order, the contractor must submit a letter from OEM stating the specifications of their air-conditioner and dimensions of pipes &amp; cables recommended for their AC.</p> <p>e) Before placing order, the contractor must submit the sample of the materials to be used and obtain prior approval from the Bank.</p> <p>f) Rate should be inclusive of all necessary Civil works related to the AC installations including core cutting, scaffolding, closing the pipe passage on the external &amp; internal wall, etc. should be inclusive of all items at all levels.</p> <p>g) The above works should be coordinated and executed along with Interior / Civil / Electrical contractors for timely completion.</p> |      |      |            |              |
|      | <b>Total - Excluding GST 18%</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |            |              |
|      | <b>Total - Including GST 18%</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |            |              |