

## **Specifications for Air-conditioning unit for the Console room of Vainu Bappu Telescope at Vainu Bappu Observatory, Kavalur.**

Design of layout, supply, installation, Testing and commissioning of Hi-wall Mounted Split AC with Cordless Remote Control, 4/5 star EER rating split air conditioner with air cooled condenser.

Capacity: 2.2 TR (Bidder to inspect site and suggest change in capacity with technical justification)

Height difference between indoor and outdoor unit: Approx 15m. (Refer attached drawings)

Distance between indoor and outdoor unit (for connection purpose): Approx 30 m. (Refer attached drawings)

5 KVA/Suitable Electronic Voltage Stabilizer for each unit shall be provided & installed.

Civil platform for the outdoor units is to be designed and constructed at the site by vendor with prior approval of drawings from Engineer In-charge.

After due necessary precautions for scanning of reinforcement, Core cutting (maximum thickness up to 2 feet) to be done for the piping on the Catwalk and Wall of VBT console room.

Piping shall be covered under PVC tray/pipe for better aesthetics.

### **Indoor unit:**

It shall have cordless remote control unit, standard air filter. The unit shall be Hi-Wall mounted with necessary supports.

### **Outdoor unit:**

It shall be fitted on a Civil platform (Approx. height 2 feet from ground) with suitable powder coated bracket/ stand with vibration damping pads.

## **Installation:**

- The indoor and outdoor unit shall be interconnected with standard sized copper piping covered with tubular Vidoflex type thermal insulation.
- The copper piping between the indoor and outdoor units shall be fixed firmly by clamping and supporting wherever required.
- A suitable sized PVC drain pipe shall be run from the indoor unit up to the nearest drain point with a 'U' trap at the end, which should be fixed firmly by clamping and supporting wherever required.
- The entire refrigerant pipe shall be covered with suitable sized PVC pipe/Tray with necessary bends, collars etc. and it shall be neatly clamped and supported as required.
- Necessary openings shall be made in the wall for taking refrigerant line outside and it shall be finished with cement plastering (FOSROC, GP2 compound etc.) to match the surroundings.
- Material quality check will be made and cleared by Engineer-In-Charge.

## **Scope of Work:**

1. Supply, installation, testing and commissioning of above specified AC units.
2. Necessary Voltage regulators shall be supplied along with the unit
3. Vendor must visit the site before quoting.
4. Design and construction of civil platform for outdoor unit is under the scope of the contractor, prior approval of drawings must be taken from Engineer In-charge.
5. Core cutting will be under the scope of contractor.
6. All the civil, carpentry and electrical work involved during installation to be finished by Vendor.
7. The installation & commissioning shall be strictly completed within 30 days of the PO release and the time can not be extended for any reasons.
8. Any materials which are required for the installation may be indicated and the specifications of the material shall be discussed and approved before using.

**Technical Specifications to be furnished along with the offer:**

1. Make
2. Model
3. Type of compressor
4. Maximum Power consumption of the unit in KW
5. Details of the electrical connections required
6. Dimension details of outdoor and indoor unit
7. Voltage Stabilizer:
8. Blower motor speeds
9. Refrigerant:
10. Noise level of Outdoor Unit
11. Noise level of indoor unit
12. Remote control operation
13. Copper condenser coil
14. Copper cooling coil
15. Photo copies of the Technical data sheet
16. Star rating (BEE)

Detailed break up for Civil, Electrical, Core cutting, per meter cost for additional copper piping and insulation etc. to be given by Vendor.

**A two part bid is required viz. technical bid and commercial bid separately.**