

Technical Specification for Industrial Air Conditioner

GENERAL REQUIREMENTS

- a) 3.0 TR or above Industrial grade Air Conditioner with copper coil and eco-friendly refrigerant shall be standard product of the manufacturer and of a design of proven reliability & satisfaction in the service intended.
- b) The system shall be designed for continuous operation of 24 hours a day and 365 days in a year to maintain the proper temperature of the rooms.
- c) Air conditioning units shall be complete with all accessories, auxiliaries, including first charge of refrigerant and lubricating oil etc. Ducting as required, shall have to be complete with duct hangers, supports and accessories etc. Diffusers shall be complete with volume control damper and frame work. Drain water piping, fittings etc. shall also have to be provided as per requirement.
- d) Necessary control, units shall have to be complete with equipment/devices required. Digital display units shall have to be Page 12 of 16 Bidder's Signature & Seal provided to indicate the room temperature and relative humidity.
- e) Condensing units shall be supplied in weather proof heavy gauge enclosure suitable for outdoor installation in a weather exposed to sun and rain. Each unit shall comprise of hermetically/semi-hermetically sealed compressor units together with associated air-cooled condensers, refrigerant tubing and electrical system meant to give a durable, trouble free and low noise performance. The compressor shall be capable of operating continuously at the maximum ambient temperature of 45°C. The condenser tubes shall be of copper having extended aluminium fins.
- f) Cooling units of higher cubic foot per minute (CFM) are to be provided to cover the depth of the room. The air flow rate (CFM) should be 1000 and above.
- g) The refrigerant shall be pre-charged, non-flammable, non-toxic and non-explosive and have the pressure and temperature characteristics suitable for this operation.
- h) All refrigerant pipes shall be of copper possessing sufficient strength and size suitable for service and shall be provided with thermal insulation of suitable material. Refrigerant piping, fittings and piping joints shall conform to the requirements ANSI B 31.5.
- i) Air-conditioning system shall be complete with condensing units, interconnecting refrigerant copper piping, PVC piping for condensed water drain, wiring between the outdoor condensing unit and indoor room unit, wiring between AC Distribution Board and outdoor condensing unit, protection devices, temperature control units and other accessories. All wiring shall be fire retardant. The inclination of the PVC piping for draining away of water shall be properly adjusted so that water leaked from the air-conditioning units is drained away from the room.

- j) The Air Conditioning units shall be complete with electrical starters, motor, wiring and protection. The electrical system shall be capable of operating on 415 V, 3 phase, 4 wire, 50 HZ system. Supply, laying and termination of outgoing cables emanating from the distribution board to each Air conditioning unit shall be carried out by the contractor. Further electrical wiring shall also be in the scope of Contractor. Necessary earthing arrangement shall be made by the contractor. Each compressor unit shall be provided with short circuit over load and under voltage protection.
- k) Warranty: Compressor should have minimum 5 Year Warranty along with 1 Year Machine Warranty. Bidder must provide 1-year comprehensive on-site warranty and it will start from the date of satisfactory installation or commissioning of goods, against the defect of any manufacturing, workmanship and poor quality of the components. No offer of the bidder will be accepted without warranty/guarantee of the supplied/ installed goods.
- l) Body surface finish should be powder coated/high quality paint finish

Guaranteed Technical Particulars of the Industrial Grade ACs: -

Sl. No	Specifications	Required Ratings and particulars
1	Tonnage	3 and above
2	Rated Power Supply	1 phase,50Hz
3	Compressor Type	Centrifugal or its equivalent. (Note: Reciprocating compressor will not be accepted)
4	Air Flow Rate (CFM)	1000 and above
5	Moisture Removal Rate(kg/hr)	4 and above
6	Compressor Warranty(yr)	5 and above