

SCOPE OF WORK

TENDER DESCRIPTION-	Supply, installation, testing, and commissioning of air conditioners along with outdoor unit protectors (heat and sun roof covers) for split ACs and a 6-year comprehensive AMC for the ACs after the warranty period, at Bathinda GA.
CONTRACT DURATION:	7 years
APPLICABILITY OF CONTRACT:	Bathinda Office (Bathinda GA)

Subject: Scope of Work - Air Conditions - Bathinda GA

Ref. Documents:

Document No	Document Subject
GGL/F&A,IR & Admin/2025/11/240350	Scope of Work - Air Conditions - Bathinda GA

Brief scope of contract would be covering below items:

- a) Site visit & Planning.
- b) Execution as per planning and Delivery within stipulated timeline. Delivery of machines within 15 days from the award of the contract. Installation, testing and commissioning within 30 days from the award of the contract.
- b) Reviewing the condition and place of the evaporative & condensing units, existing duct infrastructures and the length of the refrigerant pipes, cables and other materials required for the work and also quantum of site work for installation of the new AC units at respective locations.
- c) Transportation- Delivery of machines to be done at the specified locations as per PO.
- d) Supplying, Testing, Installation, Commissioning of new AC units.
- e) Civil & plumbing Work.
- f) Complete Testing after installation of the machines and submission of test reports with all technical parameters.
- g) Training and Documentation.
- h) Warrantee on machines- Minimum 12 months on machine & Minimum 5 years on compressors.
- h) Handover of system to GGL representative along with individual installation, testing and commissioning reports.

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i) After Sales services- services to be provided by supplier without any extra charges till the warrantee period of machine and compressor is over.

Broad scope of work is stated as below:

Note: However, any work even if not specifically mentioned but reasonably implied for the successful installation and commissioning of Air Conditioning Units shall be construed as a part of the scope of work.

1. Contractor shall supply, install and commission the GGL approved Make & Model ACs at Bathinda GA as mentioned in PO.
2. Contractor shall visit the site and submit the report for the delivery of the machines and planning with timeline for execution of installation and commissioning work.
3. The Contractor shall mobilize sufficient resources including all Tools & Tackles as required for the job, based on the target date of completion. All the lifting tools & tackles used by the contractor shall be duly tested & certified by authorized agency.
4. The contractor shall provide all materials, auxiliary equipment and consumables required for completion of the job including operation of auxiliary equipment.
5. The contractor will deliver the units/machines as per the requirement and standards. The transportation of the machines and the delivery of the machines is in the scope of the contractor.
6. Contractor will ensure that no damage is caused to the aesthetic look of the building while installation of the machines. Any damage if caused, during the course of work to be reinstated by the contractor into original condition.
7. All the machines must be genuine and as per the order. Any variation shall not be tolerated. Any scratches on the Unit (particularly indoor units), while installation by contractor, shall not be acceptable as it impacts on its outlook/décor of the unit.
8. The site described and shown on the plans, shall be cleared off all the rubbish of all kinds etc. completely. After completion of the work and the site shall be handed over in clean and neat condition.
9. In the absence of specifications for any work or material, relevant Indian Standard Specifications shall be applicable.
10. Installation of machine at height inside or outside premise shall be the sole responsibility of supplier to cater the installation process. Also supplier team has to take prior permission/permits, if applicable, from the company representative (user Dept.) before working at height or using scaffolding.
11. GGL shall ask bidder to supply any of the Make/Model that meets all the specifications indicated in the **Annexure – I**.

Below is the brief description of each item allied to or part of AC and it has to be as per below specifications.

1. EVAPORATIVE AND CONDENSING UNITS:

- 1.1 All old piping & attachments from the locations are to be dismantled. The area is to be cleaned, painted or all minor civil works, required for installation of the evaporative units, are to be carried out.
- 1.2 Condensing units of all AC units shall be installed at the roof or at the site/point as identified by the local Admin In-charge. The pipeline and cables connecting the evaporative & condensing units should be

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routed through the existing cable tray and conduit pipe only. Those should not be visible from outside of building. And in the case if alternate arrangement is required to be done, then prior permission with valid reason to be acquired from Admin person.

- 1.3 Electrical connection to all new AC units shall be provided from the most appropriate panels so to avoid any short-circuit.

2. REFRIGERANT GRADE COPPER TUBING

- 2.1 installation, testing and commissioning of refrigerant grade copper tubing in ceiling / wall interconnecting condensing and evaporative units duly insulated with insulation to prevent any heat loss, suitable sizes as per standard specifications

3. CONTROL AND POWER CABLES, MCB:

- 3.1 Supply, installation, testing and commissioning of power/ control cables of PVC sheathed flexible copper wire complete with earthing (if required then only, as the scope is for replacement of the old ACs so, might be earthing could be readily available) between evaporative and condensing units, between AC units and power supply panel and all other cables, electrical fittings etc. required for the work. The supply and installation of OFF/ON unit of each AC, MCB etc. shall be done at suitable location approachable to all, if required. All external cables shall run in cable trays.

4. DRAIN PIPING:

- 4.1 Supply, installation, testing and commissioning of rigid heavy duty UPVC drain piping (20/25/32 mm dia) suitable for 10 kg/ cm² pressure rating for evaporative units complete with necessary elbow, tees, reducers, brass connector between GI and PVC pipe etc. The drain piping shall be laid as per the site condition with the existing drain pipe. It should be assured that the drain pipe ends at a surface where the water from drain pipe does not damage other installations or aesthetic look of the building.

5. AIR DISTRIBUTION:

- 5.1 The supplied evaporative units shall be hooked up with the existing ducts. Thus, necessary ducting for hook up is to be supplied and installed. The spec and design of the hook-up duct is to be made by the contractor and shall be preferably approved by EIC before fabrication. The duct may be fabricated at site to suit pieces and as per site requirements.
- 5.2 Minor modifications in the existing ducting infrastructure for proper air distribution in all chambers in the building shall be under the scope of this contract and need to be done by contractor.

6. OUTDOOR STANDS:

Providing, erecting, fabricating the M.S. structure as per requirement on site incorporating proper size of M.S. angles, flats, bars, channels, Welded mesh, sections complete with cutting, welding, grinding & finishing duly painted with one coat of red oxide with erection on site as per direction of engineer in charge with necessary grouting, cementing, plastering & finishing for outdoor unit protection/Safety.

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7. CONTROL:

7.1. If applicable, microprocessor LED display type controller should be installed. The control system should be located properly for proper visibility and ease in operation.

8. CIVIL WORKS:

8.1 All **civil works** for installation of the pipes, zari work, core cutting, cables etc. shall be carried out by the contractor and site should be handover in finished manner

9. WORKMANSHIP

9.1. The installation shall be carried out in accordance with the best engineering practices to the complete satisfaction of the GGL site engineer/Safety person to ensure proper return, and vibration-free and noise-free installation. Any damage to the walls, building, floor, tiles, etc. during the installation of the ACs shall be rectified by the contractor on its own cost. Apart from other operational and safety controls, provision shall also be made for manual reset with HP/LP cut out and for non-recycling control relay.

All the parts must be original.

10. TESTING

The actual refrigeration capacity of the evaporative unit as tested at site shall not be below the capacity under the specific conditions as contained in the manufacturer's literature forming a part of the contract - but in no case less than the capacity specified in the tender.

11. ON-SITE SUPPORT

Vendor shall provide free service support for duration warranty period from the date of handing over of the system to GGL. This implies that in case of any problem with regard to system functionality as a whole, which encompasses hardware or software problems, GGL shall intimate the same to the vendor for suitable assistance. In order to troubleshoot / fixing the same, vendor will depute a suitable service engineer without charging any cost to GGL basis for the required duration within 24 hrs. of intimation from GGL.

12. WARRANTY

The system shall carry at least 12 months' warranty from the date of successful commissioning. It shall include repair and replacement of all component's evaporative coils, filters, refilling of refrigerant, lubricant oil, PCB etc. during warranty period, The Compressor shall carry a separate warranty of atleast 60 months.

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13. Comprehensive Annual Maintenance Contract Post Warranty:

Upon completion of the 12-month product warranty and 60 months warranty on Compressor (s), the supplier shall provide a Comprehensive Annual Maintenance Contract (AMC) for a period of 3 years.

13.1 The comprehensive AMC shall include:

- All preventive and corrective maintenance
- Replacement/repair of defective parts including PCB, evaporator and condenser coils, sensors, thermostats, filters, R32 gas etc.
- Labour, transportation and service charges
- Preventive maintenance visits (minimum 4 per year)
- Emergency service response within 48 hours of complaint

13.2 Exclusions:

- Damages due to force majeure events
- Intentional misuse or unauthorized modifications

13.3 Service Documentation:

The vendor shall maintain detailed service logs and submit AMC reports periodically for review by the designated GGL official.

14. Payment terms and conditions

- 75% of the total contract value shall be disbursed to the vendor upon successful supply, installation, testing, and commissioning of the air conditioning system.
- 5% of the total contract value shall be disbursed upon completion of the 1st year of the AMC period. This period commences after the completion of 1 year of warranty period of indoor Units, means the AMC period will commence from the 2nd year from the date of procurement.
- 5% of the total contract value shall be disbursed upon completion of the 2nd year of the AMC period.
- 5% of the total contract value shall be disbursed upon completion of the 3rd year of the AMC period.
- 5% of the total contract value shall be disbursed upon completion of the 4th year of the AMC period.
- 5% of the total contract value shall be disbursed upon completion of the 5th year of the AMC period.

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Note: The comprehensive AMC of inverter ACs will commence upon the completion of the warranty period (12 months).

15. DOCUMENTATION:

15.1 Upon receipt of the purchase order, but prior to the start of the work, the supplier shall submit the complete layout drawing of the system for approval by the EIC.

15.2 Bill of material including list of items, procured from outside agencies shall be submitted.

15.3 Technical datasheet of all items in the system shall be submitted.

15.4 As built drawing of the layout shall be submitted after completion of the work.

15.5 Supplier team shall have to maintain entry at GGL gate/security and also submit installation report copy to security personnel.

16. PENALTY:

1) Delay in machines delivery by one week from the given deadline- **Rs. 1000/- for one-week period of delay**

2) Supply of damaged machines/component and hence replacement taken place and delayed in the installation- **Rs. 500 per day of delay**

3) Variation in ordered items- **Rs. 1000/- per piece/machine.**

4) Installation timelines not meeting – **Rs. 25 per day till the date on which work gets fully completed**

5) Any kind of damage to the GGL property or assets - **70 % cost of the property/asset's actual cost.**

6) Supply of any part which is not genuine (supply under warranty period) - **Rs. 1500/- per incident**

7) Breaching of Safety norms of GGL- **Rs. 1000/- one time or per incident**

8) Showing irresponsibility in after sales services (experiencing the same for 2-3 times) – **Rs. 200 per incident**

17. TERMINATION:

The Service Provider shall abide all the terms & condition of contract. In case of breach of any of the terms & condition, the Owner shall be at liberty to terminate the contract without any notice to Service Provider and Service Provider shall have no claim for compensation of any loss that he may incur on this account. For any legal matter Ahmedabad shall be the jurisdiction.

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Annexure-I- Specifications

Technical specification sheet for both 1.5 Ton and 2 Ton 5-Star Inverter Split Air Conditioners:

Parameter	1.5 Ton Inverter AC (5 Star)	2 Ton Inverter AC (5 Star)
Type	Split Inverter Air Conditioner	Split Inverter Air Conditioner
Cooling Capacity	~ 5.2 kW	~ 6.0 – 6.5 kW
Star Rating	5 Star (as per latest BEE guidelines)	5 Star (as per latest BEE guidelines)
ISEER Value	≥ 5.0	≥ 5.0
Annual Power Consumption	~ 850 – 900 kWh/year	~ 1000 – 1100 kWh/year
Compressor Type	Rotary / Scroll (Variable Speed Inverter)	Rotary / Scroll (Variable Speed Inverter)
Condenser Coil	100% Copper	100% Copper
Refrigerant	R32 (Eco-friendly, Low GWP)	R32 (Eco-friendly, Low GWP)
Voltage Requirement	230V, 50 Hz, Single Phase	230V, 50 Hz, Single Phase
Cooling Coverage Area	~ 120 – 180 sq. ft.	~ 200 – 260 sq. ft.
Noise Level (Indoor Unit)	≤ 45 dB	≤ 45 dB

Common Features (for both capacities):

- Inverter compressor with energy-efficient performance
- Stabilizer-free operation (typically within 145V–290V)
- Anti-dust / PM2.5 air filters
- Sleep mode, Turbo mode, Auto restart

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- LCD remote control with timer and display
- Self-diagnosis function
- Eco mode for power savings
- Wall-mounted indoor unit with LED indicators
- Wi-Fi-enabled (optional, model-dependent)

Standard Accessories:

- Indoor and Outdoor Units
- Remote Control
- Copper Piping
- Drain Pipe
- Mounting Brackets
- User Manual & Warranty Card

Warranty:

- 12 months on the machine
- 5 years on the compressors.

Technical Specifications for AC outdoor Unit Protector Split AC Protector for Heat and Sun Roof, Heat Insulated, Protection from Sun/Outdoor Unit cover for Sunlight:

Feature	Description
Application	Split AC Outdoor Units (Universal Fit)
Material	High-quality, UV-resistant, weatherproof fabric (e.g., polyester or PVC-coated)
Protection	Protects against UV rays, extreme heat, rain, wind and dust
Insulation Layer	Heat-insulated inner lining to reduce heat absorption
Energy Efficiency	Reflective surface minimizes heat build-up, helping the AC operate efficiently
Durability	Tear-resistant and fade-resistant; suitable for year-round outdoor use
Fit & Installation	Designed for snug fit, includes adjustable straps/elastic edges for secure placement
Maintenance	Washable and easy to clean
Compatibility	Compatible with most 1–2 Ton split AC outdoor units

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Color (optional)	Options	
		Neutral colors like grey, beige, or white for minimal visual impact

Note- GGL will reserve the rights for selection of any brand and reserves rights for the make or model which doesn't meet the specifications requirement as mentioned above.
