



SPECIFICATION FOR SERVICE AND MAINTENANCE OF SINGLE UNIT AND CENTRALIZED HEAT PUMPS AT UJ STUDENT RESIDENCES AT ALL CAMPUSES

The University Of Johannesburg (UJ) invites you to provide a quotation for Service and Maintenance of the single unit and centralized heat pumps that support the UJ Student residences for a one year time period with an option of extending it for an additional two years, for a total contract period of three years, as per the specification contained.

Purpose

UJ wishes to appoint suitably qualified persons or organizations for the following work at the University of Johannesburg 1 year contract with an option to extend for an additional two years to three, for a total contract period of three years to provide a scheduled maintenance program covering all single unit and centralized heat pumps for the following campuses:

- **Auckland Park Campus:**

(Lebone Residence) Single Units

(Thomas Sankara Residence) Single Units

(Afslaan Residence) Single Units

(Sophiatown Residence) Centralized Unit

- **Bunting Road Campus:** APB

(Goudstad Residence) Single Units

- **Doorfontein Campus:** DFC

(Sivebeeck Residence) Centralized Unit

- **Soweto Campus: SWC**

(Ulwazi Residence) Centralized Units

(Hector Pietersen) Single Units

(Third ((Imbewu)) Residence) Single Units

(Fourth Residence) Centralized Units

Scope

Single Unit Heat Pumps:

Recommended Service { Three Times a Year for 1 year with an option to extend for an additional 2 years to a total of 3 years}

1. Check unit for any foreign partials to obstruct air flow.
2. Check if condenser if blocked.
3. Check fans motor and compressors for any strange noise.
4. Check electrical supply, and electrical connections, burnt or loose wires.
5. Check for oil residue in heat pump system.
6. Check operation of circulation pump.
7. Check operation of safety valves, multi pressure control valve and ball valves.
8. Check operation of drain cock.
9. Check operation of vacuum breaker.
10. Check operation of temperature gauges and thermostat and element.
11. Check glycol levels and refill where due.
12. Check leggings on all hot water pipework and replace where applicable.
13. Check refrigeration pressures. Check refrigeration sight glass.
14. Clean in line water filters.
15. Clean solar panels using suitable chemicals and utensils where applicable.
16. Wash the condenser with water and suitable chemicals and/or utensils.
17. Test water temperature on system and outgoing water.
18. If sight glass on compressor check oil levels.
19. Check heat pump controller for correct operations.
20. Check for any water leaks on heat pumps.

21. Conduct and submit service report and sticker after each service.

Centralized Unit Heat Pumps:

Recommended Service { Three Times a Year for 1 year with an option to extend for an additional 2 years to a total of 3 years}

Type: Solar Water Heating/Heat Pump Combination

- Service of solar panels 1.5 X 2 M and cleaning three times a year.
- Service of Alliance heat pump twice a year minor and major.
- Check operation of ball valves.
- Check operation of circulation pump twice a year.
- Check operation of multi pressure control valve once a year.
- Check operation of expansion release valve once a year.
- Check operation of vacuum breaker once a year.
- Check operation of safety valves.
- Clean strainers three times a year.
- Check operation of temperature gauge once a year.
- Check operation of drain cock.
- Check operation of thermostat and element.
- Clean electrical distribution boards, check circuit breakers and loose connections once a year.
- Service report and sticker after each service.
- Clean equipment and surrounding area after each service.
- Check for any water leaks after each service.

Type: Centralized Heat Pump with Back Up Element

- Service of 24 Kw heat Pumps three times a year minor and major.
- Clean cold water storage tanks 5000 L once a year.
- Clean hot water storage tanks 2000 L once a year.
- Check operation of circulation pump once a year.
- Check operation electrical diaphragm switch controller twice a year.

- Check operation of electrical flow switch twice a year.
- Check operation of float valve with ball in the cold water tank once a year.
- Check operation of thermostat and element.
- Check operation and pressure of buffers (pressure stabilizer).
- Clean strainers twice a year.
- Check operation of air release valve once a year.
- Check operation of non-return valves twice a year.
- Check operation of ball valves once a year.
- Check operation of safety valve 400kpa male once a year.
- Issue pressure test once a year for water storage tanks.
- Check operation of temperature gauges once a year.
- Clean electrical distribution boards, check circuit breakers and loose connections once a year.
- Clean control boxes, check components and loose connections once a year.
- Service report and sticker after each service.
- Clean equipment and surrounding area after each service.
- Check for any water leaks after each service.

NB! On the BOQ price for three years from 1 June 2024 to 31 May 2027 and put yearly escalations in % amount

NB! Suppliers can indicate how much mark-up in percentage on spares on an annual basis

List of spares is as follows:

- 1. Compressor**
- 2. PC Boards**
- 3. Pumps**
- 4. Thermostat/temperature sensor.**

SPECIAL CONDITIONS:

EXCLUSIONS: ALL SPARE PARTS, OIL, REFRIGERANT, ALL CONSUMABLES USED DURING THE SERVICE ARE EXTRA AND FOR THE CLIENTS ACCOUNT & ANY CALL OUTS WILL ALSO BE FOR THE CLIENTS ACCOUNT

See Annexure A: List of equipment and bill of quantity

NB: Breakdown exclusions are budgeted for under unscheduled maintenance.

A. Compiling of the Safety File

It is a requirement that the appointed contractor be able to supply the university with a Safety File with the items listed below; where applicable to the scope of work being tendered upon

1. Section 37 (2) (Mandatory agreement)
2. Project description/Scope of work
3. Risk Assessments
4. Safe Work Procedures
5. Personal Protective Equipment
6. Checklists of all equipment
7. Details of employees on site
8. Appointment letters
9. Letter of good standing/Insurance
10. Incident Management
11. Emergency Plan & Emergency numbers
12. Waste Management
13. MSDS's (if applicable)
14. Fall Protection Plan
15. Health and Safety Policy
16. Tool box talks
17. Safety meetings
18. Monthly Health & Safety Rep inspection sheets
19. Site Safety Rules
20. Training
21. Isolation procedures for electrical contractors

22. Permits (such as Hot work /Confined space entry)