



FACILITIES MANAGEMENT

CENTRAL TECHNICAL SERVICES

SPECIFICATION FOR SERVICE AND MAINTENANCE OF HVAC SYSTEMS – BUILDINGS FOR THE UNIVERSITY OF JOHANNESBURG

SPECIFICATIONS

The University of Johannesburg (UJ) invites service providers to tender for Service and Maintenance of HVAC systems - Buildings across four (4) campuses and associated namely: Auckland Park Kingsway Campus (APK), Auckland Park Bunting Road Campus (APB), Doornfontein Campus (DFC), Soweto Campus (SWC), JBS Towers and JBS Park Building, for a (1) one-year period with the option to extend for an additional (2) two years based on performance for a total of (3) three years, as per the specification contained in this document.

1. PURPOSE

UJ requires to appoint suitably qualified persons or organizations (of CIDB 3ME or more) for the following work at the University of Johannesburg: for Service and Maintenance of HVAC systems at all four (4) campuses namely: Auckland Park Kingsway Campus (APK), Auckland Park Bunting Road Campus (APB), Doornfontein Campus (DFC), Soweto Campus (SWC) and including the JBS Park Building and other Facilities where applicable. The service provider shall perform monthly routine maintenance (services) and testing of the following campuses:

Auckland Park Campus (APK):

	<u>APK</u>
1	Art Theater and Gallery
2	Lecture Hall G01 and G02
3	D1, D2, D3 Lab
4	Main Auditorium
5	Library
6	Madibeng
7	All Toilet Shafts Ventilation A-E Ring B,C and D Lab Toilet Shafts Library Toilet Shafts
8	B5 Building
9	C and D Les Lecture Venues - All levels Cleaning of heating coils
10	JBS Towers

Bunting Road Campus (APB):

	<u>APB</u>
1	FADA Roof
2	STH Fridges and HVAC
3	Library
4	K Block Roof
5	All Toilet Shafts Ventilation A-E Block
6	JBS Park
7	Ontdekking Building (Old canteen)
8	Concowan
9	Director's office
10	UJ FM

Doornfontein Campus (DFC):

	<u>DFC</u>
1	Qoboza/Khambule Building

Soweto Campus (SWC):

	<u>SWC</u>
1	Bram Fischer
2	Ulwazi
3	Enoch Sontonga Building
4	Robert Sobukwe Building
5	Lecture hall A and B Funda Ujabule
6	Ellen Kuzwayo Building
7	Library

- Service provider will be required to be on standby for emergencies and call outs, at all times.
- The service provider shall attend the call out within 1 hour (60 minutes).

2. SCOPE DESCRIPTION

The scope of work for the abovementioned venues is as follows:

Air-cooled Chiller or Packaged Units (Quarterly-basis)

- Check oil level in compressors (if sight glass is available- check)
- Check crankcase heater
- Check liquid line sight glass for bubbles
- Check moisture indication at sight glass
- Log Oil Pressure
- Log Suction Pressure
- Log Discharge Pressure
- Log Evaporator water temperature In and Out
- Check Refrigerant Circuit for leaks
- Check operation of low Oil Pressure Switch/ Oil Pressure Transducer
- Check operation of High Pressure Switch/ HP Pressure Transducer
- Check operation of Low-Pressure Switch/ Suction Pressure Transducer
- Check operation of Chilled Water Flow Switch
- Log compressor amperages
- Log evaporator primary water pump amperages
- Check operation of unloaders
- Chemical clean condenser coil with a low-pressure jet and bio-degradable cleaner (Bio-degradable chemicals will be charged for separately)

Electrical Control Panels:

- Panels to be cleaned internally
- Terminals to be checked and tightened
- Check fuses and ensure that circuit breakers are not tripped
- Ensure that all electrical panel doors are locked and sealed
- Ensure that bi-passed valve is working
- Remove dust and clean the internal of the control panel box

Scope of work for the Variable Refrigerant Volume (VRV) Units:

- Check Fan Speeds (Indoor Fan motor/ Blower Motor)
- Check Thermostat & Switches (excluding calibration)
- Check and Clean Air Filters
- Observe Operation of A /C Unit for vibration and noise
- (Bearing Inspection - note all bearings are sealed, unable to lubricate)
- Inspect Indoor Coil and Outdoor Coil
- Check Drip Pan & Drain (Condensate Drain- excluding chemicals for anti-algae)
- Outdoor VRV-Check refrigerant sight glass for moisture
- indicator and level of refrigerant
- Outdoor VRV-Check operation of Condenser Fan head
- Pressure control, LP and HP
- Outdoor VRV-Check electrical connections for burnt wires, loose connections etc.
- Outdoor VRV-Check Condenser fan blades
- Chemical Clean of Condenser Coils (Inspect Condenser Coils) Outdoor VRV-Check expansion valves
- Check and log on/off Coil Temperatures Indoor Unit
- Check and log on/off Coil Temperatures Outdoor Unit
- Log suction pressure (if Schroeder valve is accessible)
- Log discharge pressure (if Schroeder valve is accessible)
- Test for Refrigerant Leaks on indoor and outdoor units
- Check Starting of compressor

Scope of work for the extraction fans:

- Check operation of extraction fans
- Log fan amperage
- Check for abnormal noise
- Clean intake screen
- General Cleaning Equipment Check operation of fire dampers

Exclusions:

- Broken parts, oil samples, refrigerant and oil will be quoted for and replaced on the client's account.
- Call out and emergencies will be quoted for and paid for by the client.

NOTE: The lists of equipment to be serviced and maintained are attached separately.

3. LEGAL COMPLIANCE

All work to comply with the Occupational Health and Safety Act (Act 85 of 1993), SANS 10400-O, SANS 10400-XA, SANS 204, SANS 10142 and all other applicable standards and regulations.

4. COMPILING OF SAFETY FILE

It is a requirement that the appointed service provider 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

- Section 37 (2) (Mandatory agreement)
- Project description/Scope of work
- Risk Assessments
- Safe Work Procedures
- COVID Compliance where applicable
- Personal Protective Equipment
- Checklists of all equipment
- Details of employees on site
- Appointment letters
- Letter of good standing/Insurance
- Incident Management
- Emergency Plan & Emergency numbers
- Waste Management
- Material Safety Data Sheets (if applicable)
- Fall Protection Plan
- Health and Safety Policy
- Tool box talks
- Safety meetings
- Monthly Health & Safety Rep inspection sheets

- Site Safety Rules
- Training
- Isolation procedures for electrical contractors
- Permits (such as Hot work /Confined space entry)

5. COMMENCEMENT OF WORK

The supplier is to commence work within seven (7) days from the issue of an official purchase order from UJ.

6. REPORTING

Upon successful appointment, the service provider will provide a detailed service plan, organize access to perform the services and report all breakdowns to the UJ maintenance coordinator or applicable designated UJ staff member. Post-service meetings will be held with Archibus staff, UJ maintenance manager and maintenance coordinator where the services, any risks, and the mitigation and resolution of risks will be discussed in detail.

7. RECOMMENDATION

It is recommended that the RFP to appoint suitably qualified persons or organizations for Service and Maintenance of HVAC systems – Buildings at all four (4) campuses and associated facilities namely: Auckland Park Kingsway Campus (APK), Auckland Park Bunting Road Campus (APB), Doornfontein Campus (DFC), Soweto Campus (SWC), JBS Towers and JBS Park Building, for a (1) one-year period with the option to extend for an additional (2) two years based on performance for a total of (3) three years – be approved for Procurement purposes.