

**ENQUIRIES FOR CONTRACTOR APPOINTMENT FOR MAINTENANCE OF ROOF VENTILATORS AND HVAC ELECTRICALS AND CONTROLS SYSTEMS AT O. R. TAMBO INTERNATIONAL AIRPORT FOR A PERIOD OF 18 MONTHS.**

**Tender Reference Number: ORT6689/2021/RFP**

**ISSUE DATE :15 SEPTEMBER 2021**

**Questions and Answers**

Kindly clarify on the totals provided in the spreadsheets. Is it your budget or we have to simple crash and write our own totals? – **it is the budget.**

**SEE THE BELOW QUESTIONS ABOUT THE UNITS**

**(PLEASE NOTE ALL RESONSES IN RED)**

Kindly clarify on the totals provided in the spreadsheets. Is it your budget or we have to simple crash and write our own totals? **- it is the budget.**

## **Various Urgent HVAC electrical & Controls**

### **1.1 Supply and installation of a Chilled Water Actuator Valve.**

- I. What is the size of the piping?
- II. Is it 2-way or 3-way valves? – 2-way valve
- III. Are there existing actuators, or must the valves be supplied with actuators?
  - If there are actuators, please supply make and model. **it's a 2-port ball valve, externally threaded, PN40, DN40, kvs 16, valve must be supplied with the actuator.**

### **1.12 Supply and installation of Supply and Return Pressure sensors**

- I. Must this be a pressure switch or a pressure sensor?
  - Pressure switch = Indication of air flow
  - Pressure Sensor = Pressure reading – **Pressure sensors**

### **1.13 Supply and configure the Air Handling unit Controller**

- I. Please specify IO amount on inputs and outputs required. – **as a minimum 8 in and 8 out**

## **Chillers**

### **2.1.1 Design**

- I. Does design relate to plant control or monitoring only? - **both**

### **2.1.2 University Controller**

- I. Please elaborate on request, what is a university controller? – **Automation station/Controller.**

### **2.1.4 Remote module**

- I. Does remote module refer to gateway for communication? - **yes**

## **Cooling Towers**

### 2.1.8 CT Shut Off Valve Actuators

- I. What is the valve type and size? -Butterfly valve (equivalent to SQL36110)

### 2.1.9 Relays

- I. How many poles are required on the relay? - 8 poles
- II. What is the coil type? - 24
- III. Relay only or must it be supplied with base? – Relay only

### 2.1.10/11 Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket

- I. Must these sensors be LG-Ni1000, or can they be a different signal type? –  
Can be different

### 2.1.12/13 Flow switch for use in hydraulic systems, PN25,

- I. Can you elaborate on hydraulic, what is the application of the unit?
- II. Is it not supposed to be hydronic? – is suppose to be hydronic

### 2.1.14 Modulating valve actuator, AC 24, DC 0...10V

- I. What is the valve type and size? - it's a 2-port ball valve, externally threaded, PN40, DN40, kvs 16
- I.

### 2.1.15/16 Pressure gauges/Temperature Gauges

- I. Are these for display only or must the have an output for monitoring? – output for monitoring is required

## Cargo Refurbishment

### 2.2.1 CT Shut Off Valve Actuators

- II. What is the valve type and size? - Butterfly valve (equivalent to SQL36110)
- I.

### 2.2.2 Relays

- I. How many poles are required on the relay?- 8 poles
- II. What is the coil type? - 24
- III. Relay only or must it be supplied with base? – Relay only

### 2.2.3 Cargo Controller 33TBAC01

- I. Must these units be supplied to the “33TBAC01” make and model, or can an alternative be considered? – alternative can be considered

## Upgrade of AHUs at TA (Terminal A)

### 2.3.1 Design

- I. Does design relate to plant control or monitoring only? - **both**

### 2.3.2 Automation Station with 16 Input/Outputs on BACnet/IP

- I. Does 16 Inputs/Outputs mean 16 in and 16 out, or 8 in and 8 out? – **as a minimum 8 in and 8 out**

### 2.3.3 Duct temperature sensor 400 mm, LG-Ni1000

- I. Must these sensors be LG-Ni1000, or can they be a different signal type? – **Can be different**

### 2.3.5/6/7 Pressure gauges/Temperature Gauges

- I. Are these for display only or must they have an output for monitoring? – **Output for monitoring is required**

### 2.3.8 - 2 Way chilled water valve


- II. What is the valve type and size? – **it's a 2-port ball valve, externally threaded, PN40, DN40, kvs 16**

### 2.3.9 - Modulating air damper, AC 24 V, DC 0..10V

- III. What is the damper type and size? – **rotary air damper (, e.g GEB163.1E or better)**

**1. YEAR 1 SCOPE - Various Urgent HVAC electrical & Controls**

Item No	Description	Qty required	Unit Price	Total Price (Exc. Vat)
1.1	Supply and installation of a Chilled Water Actuator Valve	140		
1.2	Supply and Installation of VSDs for AHUs: 1,1kW VSD	1		
1.3	Supply and Installation of VSDs for AHUs: 1,5kW VSD	3		
1.4	Supply and Installation of VSDs for AHUs: 2,2kW VSD	1		
1.5	Supply and Installation of VSDs for AHUs: 3kW VSD	15		
1.6	Supply and Installation of VSDs for AHUs: 4kW VSD	17		
1.7	Supply and Installation of VSDs for AHUs: 5,5kW VSD	16		
1.8	Supply and Installation of VSDs for AHUs: 7,5kW VSD	14		
1.9	Supply and Installation of VSDs for AHUs: 11kW VSD	5		
1.10	Supply and Installation of VSDs for AHUs: 15 KW VSD	17		
1.11	Supply and installation of Supply and Return temperature sensors	100		
1.12	Supply and installation of Supply and Return Pressure sensors	100		

1.13	Supply and configure the Air Handling unit Controller	50	
Year 1 - TOTAL Sum Exc. Vat			R

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Table B: Call out + Labour	Description	Qty required	Unit Price	Total Price (Exc. Vat)
2.1.1	<b>Design</b>	1		
<b>Chillers</b>				
2.1.2	University controller	12		
2.1.3	Installation and commission	12		
2.1.4	Remote module	12		
<b>Cooling Towers</b>				
2.1.5	Water treatment sensors TDS	12		
2.1.6	Water treatment sensors pH	12		
2.1.7	Water treatment sensors conductivity	12		
2.1.8	CT Shut Off Valve Actuators	12		
2.1.9	Relays	12		
<b>Chiller and Cooling Tower</b>				
2.1.10	Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	24		



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2.1.11	Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	24		
2.1.12	Flow switch for use in hydraulic systems, PN25,	24		
2.1.13	DN20...200 Flow switch for use in hydraulic systems, PN25,	24		
2.1.14	Modulating valve actuator, AC 24, DC 0...10V	24		
2.1.15	Pressure gauges	24		
2.1.16	Temperature gauges	24		
<b>Installation of Refrigerant Monitoring System</b>				
2.1.17	MONITOR; REFRIGERANT, 1PPM 16-POINT	2		
2.1.18	MULTI GAS, WITH VISUAL ALARM Installation of Refrigerant Monitoring	2		
<b>Year 2 - Chiller and Cooling Tower Control Upgrade (TA and TB) : Sub-Total Exc. Vat</b>				<b>R</b>
<b>2.2 Area : Cargo Refurbishment - Year 2 scope</b>				
Item No	Description	Qty required	Unit Price	Total Price (Exc. Vat)
<b>Replacement Cooling Tower Cut - Off Valve Actuators</b>				
2.2.1	CT Shut Off Valve Actuators	2		
2.2.2	Relays	2		
2.2.3	Cargo Controller 33TBAC01	375		
<b>Installation of Refrigerant monitoring system</b>				





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2.2.4	MONITOR; REFRIGERANT, 1PPM 16-POINT	1		
2.2.5	MULTI GAS, WITH VISUAL ALARM Installation of Refrigerant Monitoring	1		
<b>Year 2 - Cargo Refurbishment: Sub-Total Exc. Vat</b>				<b>R</b>
<b>2.3 Area: Upgrade of AHUs at TA (Terminal A) -Year 2</b>				
Item No	Description	Qty required	Unit Price	Total Price (Exc. Vat)
2.3.1	Design	1		
2.3.2	Automation Station with 16 Input/Outputs on BACnet/IP	24		
2.3.3	Duct temperature sensor 400 mm, LG-Ni1000	96		
2.3.4	Variable Speed Drive G120P, FSC, IP55, Filter A, 5.5kWx13, 7.5kWx8, 11kWx2, and 15kWx1	24		
2.3.5	Pressure Gauge and Transmitter	72		
2.3.6	Temperature gauge	48		
2.3.7	Temperature gauge	48		
2.3.8	2 Way chilled water valve	24		
2.3.9	Modulating air damper, AC 24 V, DC 0..10V	48		
<b>Year 2 - upgrade of AHUs at TA (Terminal A): Sub-Total Exc. Vat</b>				<b>R</b>
<b>Year 2 - TOTAL Sum Exc. Vat</b>				<b>R</b>



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