

BILL OF QUANTITY

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b><u>MECHANICAL WORK</u></b>				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	<b>Proprietary items or materials</b>				
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent				
	<b><u>THE FOLLOWING TO MECHANICAL INSTALLATION</u></b>				
<b>1</b>	<b>Supply, install and commission Rooftop packaged units complete with all necessary controls and accessories including filters,built-in humidifiers,suitably sized attenuators and anti-vibration mountings all mounted on a 150mm high concrete slab. Unit capacity shall be as follows:</b>				
1.1	PU01 - 902l/s and 9,4kW colling, 1,9kW heating, 9,7kW reheat and 2,9 kg/hr hum.	No	1		
1.2	PU02 - 1428l/s and 15,0kW colling, 4,3kW heating, 15,4kW reheat and 5,0 kg/hr hum.	No	1		
1.3	PU03 - 1294l/s and 16,4kW colling, 4,9kW heating, 14,0kW reheat and 9,2 kg/hr hum.	No	1		
1.4	PU04 - 1335l/s and 17,7kW colling, 10,0kW heating, 14,4kW reheat and 12,2 kg/hr hum.	No	1		
1.5	PU05 - 4240/s and 85kWcooling and 97kW heating, full F.A.	No	1		
<b>2</b>	<b>Supply and Install VRF Heat Recovery Inverter type AC units complete with condensate pumps and Wires remote Outdoor Unit</b>				
2.1	195,2kW outdoor VRF heat recovery condensor unit.	No	1		
	<b>Indoor Units</b>				
2.2	Hide-away Unit 18,0kW cooling plus heating	No	3		
2.3	Hide-away Unit 14,0kW cooling plus heating	No	3		
2.4	Hide-away Unit 12,8kW cooling plus heating	No	1		
2.5	Hide-away Unit 11,2kW cooling plus heating	No	1		
2.6	Hide-away Unit 9.0kW cooling plus heating	No	1		
2.7	Midwall unit 3,6kW cooling plus heating	No	4		
2.8	Cassette Unit 7,1kW cooling plus heating	No	1		
2.9	4 port MCU Kit	No	4		
2.10	Refrigerant pipes for heat recovery units to suite the lab installation	Item	1		
2.11	dia 32 uPVC drainage piping including bends	m	100		
2.12	200 wide heavy duty welded wire mesh including supports	m	150		
2.13	Circle panel	No	2		

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<b>3</b>	<b>Supply and Install Air Terminals</b>				
3.1	1500 x 400mm weather louvre complete with wooden frame and all accessories required to mount in to position	No	8		
3.2	400 x 400mm door transfer grilles	No	20		
3.3	600 x 600mm 4 way blow Supply Ceiling Diffuser with opposed blade dampers	No	58		
3.4	600 x 600mm Return Ceiling Diffuser	No	9		
3.5	1200x600mm return grille hinged with filters	No	9		
<b>4</b>	<b>Supply and install the following externally insulated galvanised mild steel ducting as per ANSI/SMACNA (sheet metal and air conditioning contractors national associations) and technical specification, complete with hangers, duct sealing and all mounting accessories</b>				
4.1	200mmø Flexi- duct Insulated	m	35		
4.2	250mmø Flexi- duct Insulated	m	45		
4.3	300mmø Flexi- duct Insulated	m	5		
4.4	350mmø Flexi- duct Insulated	m	25		
4.5	200 mmø Insulated	m	20		
4.6	250 mmø Insulated	m	30		
4.7	300 mmø Insulated	m	30		
4.8	350 mmø Insulated	m	25		
4.9	400 mmø Insulated	m	15		
4.10	300 x 250 mm Insulated	m	25		
4.11	300 x 300 mm Insulated	m	35		
4.12	350 x 300 mm Insulated	m	5		
4.13	350 x 350 mm Insulated	m	35		
4.14	400 x 300 mm Insulated	m	15		
4.15	400 x 350 mm Insulated	m	40		
4.16	400 x 400 mm Insulated	m	55		
4.17	450 x 400 mm Insulated	m	10		
4.18	450 x 450 mm Insulated	m	45		
4.19	500 x 400 mm Insulated	m	10		
4.20	500 x 450 mm Insulated	m	5		
4.21	500 x 500 mm Insulated	m	5		
4.22	550 x 550 mm Insulated	m	35		
4.23	600 x 500 mm Insulated	m	35		
4.24	600 x 600 mm Insulated	m	15		
4.25	700 x 600 mm Insulated	m	5		
4.26	800 x 700 mm Insulated	m	10		
4.27	Duct fittings and accessories as per drawings provided.	Item	1		
4.28	Duct pressure testing and balancing of the system	Item	1		

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<b>5</b>	<b>Supply and install the following duct accessories complete with mounting accessories</b>				
5.1	200 mmø Volume control or butterfly damper	no	1		
5.2	250 mmø Volume control or butterfly damper	no	2		
5.3	300 mmø Volume control or butterfly damper	no	2		
5.4	300 x 250 mm Volume control or butterfly damper	no	6		
5.5	300 x 300 mm Volume control or butterfly damper	no	5		
<b>6</b>	<b>Electrical Installation for HVAC</b>				
6.1	Supply and install Electrical installation and wiring, etc., complete for HVAC units, including local starter/isolator switches and fire alarm interface	Item	1		
<b>7</b>	<b>Stripping of existing airconditioning installations</b>				
7.1	Allow for disconnection, dismantling and removal of the HVAC installations first to a temporary location on site as pointed out by the Facilities Manager and final disposal off site.	Item	1		
<b>8</b>	<b>Supply and install the following wall mounted extraction fan complete with relevant electronic and electrical wiring, speed controllers, support brackets, AND ALL NECESSARY MOUNTING ACCESSORIES. the fan shall be wired to run whenever the oxygen plant is running.</b>				
8.1	100l/s @ 50Pa wall mounted extraction fan	Item	1		
8.2	342l/s @ 50Pa wall mounted extraction fan	Item	2		
8.3	140l/s @ 50Pa wall mounted extraction fan	Item	2		
<b>9</b>	<b>Supply and install reverse osmosis plant with a capacity flow rate of 28 litres per hour for treated water supply to the HVAC system humidifiers. The reverse osmosis plant shall be complete with relevant controls, water and electrical connections, support brackets, AND ALL NECESSARY MOUNTING ACCESSORIES as described in the specification</b>	No	1		
9.1	Supply and install PEX pipework and fittings to supply water from the Reverse osmosis plant to the AHUs. Pipe diameter to be 10mm diameter	m	60		

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
10	<b>Builderswork</b>				
10.1	Make openings in the wall to accommodate new ductwork. Make good after installation, including plaster and painting as necessary.	Item	1		
10.2	Supply and install 600 x 600 x 6mm Thick vinylclad fibre cement ceiling boards, cladded in embossed white to match existing ceiling panels, for replacement of broken ceiling tiles.	m²	140		
10.3	Supply and install 40/40/8mm Mentis grating in galvanised mild steel	m²	50		
11	<b>General</b>				
11.1	Testing and commisioning of the above system to the complete satisfaction of the Mechanical engineer and client	item	1		
11.2	Validation of the above system to the satisfaction of the end-users and facilitations manager, in accordance with the specification	item	1		
11.3	Preparation and supply of handover documents	item	1		
11.4	Production of shop drawings and schematics	item	1		
11.5	Allow for a working in an operational building and working on half the building at a time as opposed to working in a vacant building.	item	1		
11.6	Allow for defects and maintenance of the HVAC and RO Plant installation works after practical completion for a period of 12 months	item	1		
11.7	Rigging and/or scaffolding of equipment/materials as requires	item	1		
11.8	Allow for the submittal of test schedules as stated in the specification	item	1		
Grand Total					