

**PONDICHERRY UNIVERSITY  
ELECTRICAL WING**

**Schedule of Work**

**Name of Work:** Supplying, installing, testing and commissioning of package air conditioning plants for Ultra Clean Laboratory to the newly constructed Earth Science Department at Pondicherry University Campus.

S. No.	Description of Item	Qty	Unit	Rate	Amount
1.	<p>Supplying, installation, testing and commissioning of floor mounted made with CRCA/GI sheet powder coated panels of 11 ton capacity, twin circuit package air conditioner comprising of the following:</p> <p>a) Scroll type hermetically sealed compressors suitable for operation with R-22 refrigerant on 380-420 volts, 3 phase, 50Hz Alternate supply with internal over load protection.</p> <p>b) Air-cooled condenser powder coated with inner grooved copper tubes, hydraulically bonded to corrugated, slit aluminium anti corrosion coated blue fins, propeller type fan and suitable motor, necessary release valve, base supports, rubber pads and base for outdoor use.</p> <p>c) Indoor unit (evaporator) with inner grooved copper tube, hydraulically bonded to corrugated, slit aluminium fins, statically &amp; dynamically balanced centrifugal fans, suitable motor, and thermostatic expansion valve.</p> <p>d) Filter &amp; drier, air filters, LP, HP pressure cut outs, thermostat</p> <p>e) Control panel fixed indoor unit with micro processor based control with temperature control, compressor ON/OFF, starters for main compressor motor, condenser motor, contactors, time delay, single phasing</p>	1	Each		

	<p>preventor, phase reversal protections, digital display for voltage, current, temperature cut off, self diagnosis function for faults, partial load operation with memory back up, auto restart after power failure, programmable timer with necessary cabling.</p> <p>f) Supply and charging the required quantity of refrigerant 22 and compressor oil, leak testing, vaccumising the entire system as required. Make:BlueStar/Carrier/LG/ETA/Voltas</p>				
2.	Hard drawn copper piping of suitable size connecting refrigerant circuits both suction & discharge sides, control cable, earthing etc., between indoor and out door unit( Both suction and discharge line will be taken as single unit for measurement purpose).	50	mtr		
3.	Supplying, installation of MS Callar damper with canvass cover to connect the AC plant outlet and duct/plenum as required.	1	Each		
4.	Supply and installation of GI ducting of 20 G with suitable acoustical insulation for plenum with provision for micro filter compartment including anchor fasteners and supporting angles as required.	12	Sq.mt		
5.	Supply and installation of GI ducting of 22 G for supply and return air including anchor fasteners and supporting angles as required.	30	Sq.mt		
6.	Supplying, installation of powder coated coated Aluminium Grill with sufficient louvers to be fixed on GI ducting for air distribution.	6	Each		

7.	Room air dilution modules with HEPA filters made of 100% micro fibre glass to filter 0.3 $\mu$ and large particles at 99.97% minimum efficiency, to be installed in existing wall/surface of clean room(Total capacity 1200 cfm).	6	Each		
8.	Fire dampers with control from the fire alarm system.	3	Each		
9.	Thermostic temperature control & dehumidication with electrical strip heaters.	1	1 Lot		
10.	Temperature indicator and pressure indicator.	1	1 set		
11.	Fresh air dampers with filters and bird screen.	1	Each		
12.	Minor civil works for mounting outdoor units and drawing copper pipe on wall including mounting steel angles to fix outdoor unit wherever necessary as per site condition.	2	Each		
		<b>TOTAL</b>			

