

STATE BANK OF INDIA - RBO-2/AO1 BANGALORE -SOUTH
 BOQ FOR HVAC WORKS AT KUMARASWAMY LAYOUT -07631

Sl.No	Description	Unit	Qty	Rate		Amount	
				Supply	Installation	Supply	Installation
1.0	VRF INSTALLATION –OUTDOOR UNIT Supply, Installation, testing and commissioning of VRF Outdoor units consists of 100 % based scroll / rotary compressor and 100% Inverter type ODU with fully variable speed compressor with copper condensor only, DC fan motor with aero-spiral fan blade, e-pass heat exchanger, safety valves, solenoid valves, receiver, Sub Cool system, check valve, electronic expansion valve, high pressure switch, low pressure sensor, pressure regulating valve refrigerant filter, stop valve, accumulator and outdoor branch kits. Rate inclusive of R410A refrigerant for entire circuits & oil pre charging, vibration isolators, supports and necessary accessories etc..						
1.1	50.60 kW Colling capacity (16.0 HP)	Nos	1				
1.2	Lifting Shifting of ODU's at desired location with Crane, placing at MS Frames	Nos	1				
1.3	MS frame for making a overead pedastal structure with primer paints, Fabrication etc to hold te unit ODU at > 6.5 Ft above thbe base frame with catwalk arrangements, Laderer etc for regular servincings etc as required after commissioning	lot	1				
2.0	Supply and installation of MS Frame for VRF outdoor units and civil works for foundation /pedestal works,etc at Terrace .	Nos	0				
3.0	Supply, installation, testing and commissioning of 4-way VCC-Variable Compact Cassette units upto 1.0 Tr onwards.The sizes of cassette units would be approx 208x570x570 or 258x840x840 and the units should be complete with inbuilt drain pump, controls, microprocessor control panel, wiring, Electronic Expansion Contorller etc.The unit shall be charged with R410 A refrigerant.The noise level shall not be more than 55 dB(A)at normal operation measured horizontally 1m away and 1.5m above ground. The capacities of each machine and quantities are as indicated below.						
3.1	2.3 kW Cooling capacity (0.6 TR) / 325 CFM -----(ALL VCC)	Nos					
3.2	3.2 kW Cooling capacity (0.8 TR) / 325 CFM-----(ALL VCC)	Nos	0				
3.3	3.9 kW Cooling capacity (1.0 TR) / 325 CFM ----(ALL VCC)	Nos	2				
3.4	4.5 kW Cooling capacity (1.27 TR) / 565 CFM ----(ALL VCC)	Nos					
3.5	5.8 kW Cooling capacity (1.5 TR) / 385 CFM, (ONLY VLC)	Nos	0				
3.6	7.7 kW Cooling capacity (2.0 TR) / 590 CFM, (ONLY VLC)	Nos	6				
3.7	9.0 kW Cooling capacity (2.8 TR) / 636 CFM,(ONLY VLC)	Nos					
3.8	12.4 kW Cooling capacity (3.18 TR) / 1024 CFM, (ONLY VLC)	Nos	0				
3.9	14.0 kW Cooling capacity (3.9 TR) / 1059 CFM, (ONLY VLC)	Nos	0				
4.0	Supply of hand held Cordless Remote controllers	Nos	7				
5.0	Supply, Installation, Testing & Commissioning of Refnet Joints, T joints of Suitable Size for the above system.						
5.1	Y joints / Refnet Joints	Nos	6				
6.0	Nitrogen Pressure testing & Additional gas charging for the entire length of copper tube - Refrigerant R410A / Environmental friendly refrigerant						
6.1	50.60 kW Colling capacity (18.0 HP)	Nos	1				
7.0	Supply, Installation, Testing and Commissioning of the refrigerant copper piping with 13mm/19mm nitrile rubber insulation with UV white tape in sleeve form. The Ref. Piping shall be pressure tested at 1.5 times the working pressure. The Piping shall be properly supported with bracket and supporting rods etc.,						
7.2	28.6 mm O.D. (13mm thick insulation)	Rmt	22				
7.3	22.2mm O.D. (13mm thick insulation)	Rmt	10				
7.4	19.1mm O.D. (13mm thick insulation)	Rmt	6				
7.5	15.9 mm O.D. (10mm thick insulation)	Rmt	25				
7.6	12.7mm O.D. (10mm thick insulation)	Rmt	40				
7.7	9.5 mm O.D. (8mm thick insulation)	Rmt	38				
7.8	6.4 mm O.D. (8mm thick insulation)	Rmt	18				
8.0	Supply & installtioan of CPVC pipe of with 6mm thick nitrile rbber insulation and necessary supports and fixing accessories etc.						
8.1	25mm NB	Rmt	20				
8.2	32mm NB	Rmt	40				
9.0	Control Wiring: Control cabling from Indoor to outdoor unit for all the units with the necessary fittings. The cabling shall be FRLS weather proof type as most of the cabling will have open exposure to atmosphere. The cabling shall be bundled properly and shall be neatly aligned with the Refrigerant piping. The cabling shall be well supported at specific intervals and & similar to refrigerant piping.						
9.1	2 C X 1.0 Sqmm cable	Rmt	100				
9.2	3 C X 1.5 Sqmm cable	Rmt	10				
	TOTAL						
	Grand Total						
	GST AS APPLICABLE SHALL BE EXTRA						