



STATE BANK OF INDIA					
TECHNICAL BID FOR PROPOSED AIR CONDITIONING WORKS OF VRMC FORT					
Sr. no	Particulars	Qty	Nos.	Esrtimate	
				Rate	Amount
A	VRF OUTDOOR UNITS: Supply of Out Door Units suitable for VRF / VRV System Bluestar, Daikin, Mitsubishi, Carrier-TOSHIBA, HITACHI, Voltas, LG.				
1	Supply of Modulating outdoor units, with multi/single hermetically sealed scroll compressors (minimum one/two compressors) with inverter type compressor, low noise propeller type aero spiral fan, special pre-coated fins, panel, corrosion resistant (suitable for seaside installation) coated condenser, inverter-based condenser fan M.S.hot dip galvanized stands / supports, electrical & microprocessor panel, isolating valves and all the necessary accessories for proper functioning of the units, having following approximate capacities. The unit suitable for operation on R-410a/ Eco friendly refrigerant. The unit shall operate on 415 ± 10% Volts, 50 cycles, 3 phase, 4 wire AC supply. Outdoor units suitable for air over condenser temperature of 50deg.c Note: Fins and copper tubes of Air Cooled Condenser along with copper tubing / piping with all joints and U- Bends exposed to coastal areas corrosive atmosphere / aggressive ambient, shall be painted with special corrosion prevention coating either in factory or at site.				
a	20HP VRF ODU SEPARATE UNITS	2	No		
b	18HP VRF ODU SEPARATE UNITS FOR GR. FLOOR & 1ST FLOOR	2	No		
2	Supply of VRF based Indoor units complete with cord less remote control and all accessories, Vibration isolators & supports. The indoor unit shall be suitable for a power supply of 240V/ 1 phase/ 50Hz OR 415V / 3 phase / 50Hz.				
a	4.0 TR 4-way Cassette type Indoor Unit	12	nos		
b	3.0 TR 4-way Cassette type Indoor Unit	4	nos		
3	Refnet Joints set for suction & Liquid lines				
	Supply of Refnet Joints	7	Sets		
4	SUPPLY of following inverter 5 star high wall SPLIT AIR CONDITIONERS of approved make having ODU & Single circuits with scroll /rotary inverter Compressors, eco friendly gas including indoor unit with fan, fan- motor, Copper cooling coil, expansion device, condensing unit, compressors, cond. coils, cond. Fans, safety cutouts, inbuilt control panel complete with contactors, relays, internal cabling, thermostat to control temperature & machine, having single Indoor unit & single Outdoor unit with display facility, cordless remote etc The price inclusive of 3mtr copper pipe.				
a	1.5 TR	2	nos		
HIGH SIDE WORKS TOTAL-A					

Sr. no	Particulars	Qty	Nos.	Esrtimate	
				Rate	Amount
	LOW SIDE WORKS				
B	Installation of VRF/ VRV system				
5	Installation, Testing and Commissioning of 20/18 HP/ VRF ODU Out Door Units suitable for VRF / VRV System -Price shall inclusive of Pressure testing, Lifting, Shifting of all VRF UNITS, and other necessary accessories Pressure Testing, Nitrogen flushing, testing & commissioning of the air-conditioning system	4	nos		
6	Installation, Testing and Commissioning of Indoor Units suitable for VRF / VRV System. Costs shall include hanging / mounting arrangements for the respective IDUs and shall also include for wall mounting of remote controllers near respective units and lifting, shifting and erecting etc				
a	3.0/4.0 TR 4-way Cassette type Indoor Unit	16	nos.		
7	Installation, Testing, and Commissioning of following DX - type HIGH WALL UNITS with Scroll / Rotary compressors with inverter based type R32, R410, R22 Refrigerant.				
	1.5 TR	2	nos		
8	REFRIGERANT PIPING FOR VRF- Supply, installation, testing & commissioning of the insulated refrigerant piping with Copper Ref. Hard piping pair (Liquid+ suction) Outdoor to refnet & refnet to refnet of the required sizes for all the units with refnets as per specs. The insulation shall be of 19mm/13mm thick approved make through out the running length of Ref. piping. The piping shall be well supported at specific intervals with GI supports with insulated PUF saddles and installed on GI cable trays supported from wall / roof with anchor fasteners & C type ms angle. Both Liquid and Suction line will be measured as single line.	150	mtrs		
9	REFRIGERANT PIPING FOR VRF- Supply, installation, testing & commissioning of the insulated refrigerant piping with Copper Ref. soft piping pair (Liquid+ suction) refnet to Machine of the required sizes for all the units with refnets as per specs. The insulation shall be of 19mm/13mm thick approved make through out the running length of Ref. piping. The piping shall be well supported at specific intervals with GI supports with insulated PUF saddles and installed on GI cable trays supported from wall / roof with anchor fasteners & C type ms angle. Both Liquid and Suction line will be measured as single line.	100	mtrs		
10	REFRIGERANT PIPING FOR SPLIT AC UNIT Supply & installation for additional insulated hard/soft copper refrigerant piping (Liquid+Suction) complete with fittings, elbows, bends, supporting arrangement on walls, cable trays. (separate for each unit) Hot side + cold side piping will be measured as one length existing copper Refringent piping for 1.0 TR/ 1.5 TR/ 2.0 TR Hi wall type unit will be measured beyond 3mtrs of each unit. Both Liquid and Suction line will be measured as single line.	15	mtrs		
11	CONTROL CABLING FOR VRF Supply, installation, testing & commissioning of the control cabling from indoor to outdoor unit with Heavy duty 25mm PVC Conduit 3CX1.5 sq. mm. shielded communication copper Cable of approved make	300	mtrs		
12	CONTROL CABLING FOR SPLIT AC UNIT Supply, installation, testing & commissioning of the control cabling from indoor to outdoor unit with Heavy duty 25mm PVC Conduit 3cX1.5 sq. mm. shielded communication copper Cable of approved make	20	Mtr		

Sr. no	Particulars	Qty	Nos.	Esrtimate	
				Rate	Amount
13	DRAIN PIPING FOR VRF & SPLIT AC UNIT Drain water piping work out of following PVC/HDPE hard pipes covered with Hilton insulations, complete with fittings, bends, elbows, tees flanges, tapplings, wall sleeves, hangers, supports, anchors				
a	25 mm PVC/HDPE hard pipes	40	Mtr		
b	32 mm PVC/HDPE hard pipes	30	Mtr		
c	40 mm PVC/HDPE hard pipes	20	Mtr		
14	M. S. Epoxy Painted Stand for split AC Outdoor Unit complete with screw, nut bolt anchor fastner etc. complete in all aspect.	2	Nos		
15	M. S. Epoxy Painted Stand for VRV Outdoor Unit with screw, nut bolt anchor fastner etc. complete in all aspect.	4	Nos		
16	Supply & Gas top up with REFREGERENT 410 GAS FOR VRF	35	Kg		
17	Core Cuttings & filling the same with cement and access	2	Nos		
18	Supply & Installation of Digital Timer Switch alongwith suitable size enclosure box for AC etc. including all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)	1	Nos		
19	Supply Installation Testing Commissioning of Drain Pump suitable for 2.0/1.5 TR Split airconditioner as approved by SBI Engineer / consultant)	1	No		
LOW SIDE WORKS TOTAL- B					
TOTAL (A+B)					
C Annual Maintenance Contract					
20	Comprehensive Annual Maintenance Contract (CAMC) for the Air Conditioning units installed after warranty / defects liability period of one year (i.e. 28 HP VRF indoor and out door units). This includes all spares, compressor, replenishing the refregerant, Bimonthly servicing, any number visits if any problem occurs and scope as specified etc. Payment will be paid quarterly/Half yearly.				
a	Second Year 76 HP NOS	76	HP		
b	Second Year 76 HP NOS	76	HP		
AMC TOTAL- C					
GRAND TOTAL (A+B+C) (Excluding GST)					