

**Air-Conditioning estimate for the SBI KATRAJ Branch, Mumbai**

Sr. no	Particulars	Qty	Nos.
1	<b>Supply of Out Door Units suitable for VRF / VRV System Bluestar, Daikin, Mitsubishi Heavy, Mitsubishi Electric, Carrier-TOSHIBA, HITACHI (No Midia, No logicool).</b>		
	Supply of Modulating outdoor units, with multi scroll compressors (minimum one/two compressors) with inverter type compressor, 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. Outdoor units suitable for following capacities:		
	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 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		
i	<b>12 HP VRF ODU</b>	2	No
2	Supply of VRF based Indoor units complete with remote 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		
	4-way Cassette Type Indoor Units, unit shall be complete with wireless remote controller		
i	3.2/3.0 TR	6	nos
ii	1.5 TR	2	nos
iii	1.0TR	2	nos
3	SUPPLYING OF following CASSETTE / SPLIT (single/three phase) AIR CONDITIONERS- AIR-COOLED TYPE having ODU & Single circuits with Scroll/rotary Compressors including indoor unit with remote control, 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		
i	1.0-TR High Wall Split Unit GE rating of three star and above	2	nos
ii	1.5-TR High Wall Split Unit GE rating of three star and above	2	nos
4	<b>Refnet Joints</b>		
i	Supply of Refnet Joints	10	nos
	<b>SECTION 'A' TOTAL</b>		
	<b>B-SECTION</b>		
1	<b>Installation of VRF/ VRV system</b>		

	i	Installation, Testing and Commissioning of Out Door Units suitable for VRF / VRV System & -Price shall inclusive of Refrigerant charge, LIFTING SHIFTING OF ALL VRF UNITS, and other necessary accessories Pressure Testing, Nitrogen flushing, eco friendly gas charging (R410A), testing & commissioning of the air-conditioning system		
		12 HP VRF ODU	2	no
2		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, ERECTION.		
		4-way Cassette Type Indoor Units, unit shall be complete with wireless remote controller		
	i	3.2/3.0TR	6	nos
	ii	1.0/1.5 TR	2	nos
	iii	1.0TR/1.5 TR Split AC	2	nos.
3		<b>REFRIGERANT PIPING FOR VRF</b>		
	i	Supply, installation, testing & commissioning of the insulated refrigerant piping for all the units as per specifications with insulation of thick Nitrile rubber throughout the running length of the refrigerant piping with supporting arrangements		
4		<b>Suction &amp; liquid line for outdoor to indoor unit:</b> combination of Copper Ref.Hard piping & soft piping of the required sizes for all the units with refnets as per specs. The insulation shall be of 19mm/13mm thick Armaflex 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.	180	mtrs
5		<b>REFRIGERANT PIPING FOR SPLIT AC UNIT</b>		
	a	Supply & installation for additional Hilton insulated hard/soft copper refrigerant piping 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 1.5/1.0TR Hi wall type unit will be measured beyond 3mtrs of each unit.	60	mtrs
		<b>CONTROL CABLING FOR VRF</b>		
	b	Supply, installation, testing & commissioning of the control cabling from supply to outdoor unit .and from outdoor to central controller 4cX10.0 sq. mm. shielded communication copper cable(Polycab/RR/Havells)	50	mtrs
		<b>COMMUNICATION CABLING FOR VRF</b>		
	c	Supply, installation, testing & commissioning of shielded communication copper cabling required from indoor unit to outdoor unit. Power & control cabling for various VRF indoor unit type unit(3cX1.5 sq. mm.) (Polycab/RR/Havells)	150	Mtr
		<b>COMMUNICATION CABLING FOR SPLIT AC</b>		
	d	Supply, installation, testing & commissioning of shielded communication copper cabling required from indoor unit to outdoor unit. Power & control cabling for 1.5TR highwall type unit(3cX1.5 sq. mm.) (Polycab/RR/Havells)	50	Mtr
6		<b>DRAIN PIPING FOR VRF &amp; SPLIT AC UNIT</b>		

	i	Drain water piping work out of 25/30 mm PVC/HDPE hard pipes covered with Hilton insulations, complete with fittings, bends, elbows, tees flanges, tappings, wall sleeves, hangers, supports, anchors	80	mtrs
7		Fresh air with cowl	3	nos
8		GI CABLE TRAY 200mm wide, 22swg	40	mtrs
9		CONDENSING UNIT STANDS FOR SPLIT AC UNIT	4	Nos
10		CONDENSING UNIT STANDS FOR 12 HP VRF	2	Nos
11		REFREGERENT 410 GAS FOR VRF	20	KG
12		<b>Core Cuttings</b>	5	Nos
13		Remove the Existing 1.5 TR / 2 TR / 1 TR High Wall Split units & Refixed the same as per new location including shifting of outdoor unit Out door MS Stand, MS Bracket etc. As per the instructions of the Architects/ Engineer	1	Nos
14		Gas charging, minor repair and cleaning of the old AC of 1.5 TR / 2 TR / 1 TR High Wall Split units	1	Nos
15		Supply & Installation of 16A AC1, digital timer including power circuit wiring of (2x2.5 + 1x2.5Sq.mm) FRLS flexible wires laid through PVC conduit directly taken from DB including all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)	1	Nos
16		4C x 16 Sq.mm Copper armoured cable with bare 12 swg GI wire from MCCB/ELCB to VRF Outdoor unit.	30	Mtr
		<b>SECTION 'B' TOTAL</b>		
		<b>TOTAL OF HIGH SIDE-A</b>		
		<b>TOTAL OF LOW SIDE-B</b>		
		<b>GRAND TOTAL (A+B) (Excluding GST)</b>		
		<b>GST ON SIDE A( 28%)</b>		
		<b>GST ON SIDE B( 18%)</b>		
		<b>Total after GST</b>		

SIGNATURE & STAMP OF VENDOR