

ESTIMATE

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NAME OF THE CLIENT: STATE BANK OF INDIA

Date:21-06-2021

ADDRESS: Ground Floor, South & North Wing, Commercial Client Group Branch,

Horniman Circle, Fort, Mumbai

NATURE OF WORK: - AIR CONDITIONING WORK

NO.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A	SUPPLY OF FOLLOWING EQUIPMENTS				
1.0	VARIABLE REFRIGERANT FLOW SYSTEM with Ozone friendly Gas of Mitsubishi Electric / Hitachi/ Daikin/ Mitsubishi Heavy Industries/Toshiba/ Blue star/Carrier/Voltas Make .				
	Variable Refrigerant Flow modular type airconditioning system complete with indoor and out door units with individual controller as per detail given in specifications and having following items :				
	The vendor can select their configuration based on their product configuration and performance. However,the selection capacity of the outdoor unit should be in line with the specification and concept briefed in the tender document/drawing.				
	Modular type outdoor units equipped with highly efficient twin rotary or scroll inverter compressors,special acryl precoated heat exchanger,low noise condenser fan,auto check function for connection error, auto address and multi connection piping kits and any other related items as per the manufacturers standards to be included in the quote. The quoted price shall be inclusive of full charge of refrigerant gas.				
1.1	VRV OUTDOOR UNITS <u>Supply of below mentioned capacity only</u>				
1.1.1	40 HP	No.	1		
1.1.2	25 HP	No.	1		
1.2	VRV INDOOR UNITS (IDU)				
	Indoor Units of Ductable / Cassette / Hi-wall type				
	Ceiling mounted Ductable, Cassette & Hi-wall type indoor units with , fan of whisper quietness, compact cooling coil, electronic expansion valve, suction air grill, drain pump,woven type filters etc. with remote				
	All the valve packages to be included in the quotes				
	Supply of below mentioned capacity				
1.2.1	4Way Cassette units (Standard size)				
1.2.1.1	3 TR (CONFERENCE ROOM-2 + GM CABIN-1 + STAFF AREA-6 + GM CABIN-1)	Nos	10		
1.2.1.3	1.5TR (DISCUSSION ROOM -2 +STAFF WORKSTATION -3 + SECRETARY ROOM & PASSAGE-1 + LAW.DEPT- 1+VIGILANCE DEPT-2 + WAITING AREA-1)	Nos	10		
1.2.1.4	1.0 TR (AGM CABIN-4 + ANTI ROOM-2)	Nos	6		
1.2.1.8	2 TR (HR DEPT-1)	Nos	1		
1.3	Supply of Refrigerant Joints for Indoor and Outdoor Units.	Nos	30		
SUB TOTAL A					
TOTAL					
GST WILL BE EXTRA 28%					
B	INSTALLATION OF FOLLOWING EQUIPMENTS				
	Installation, charging and commissioning of the VRV / VRF systems with the R-410 A refrigerant for the below stated machines as per the specs. This shall include the nitrogen leak testing, oil charging,vaccumisation, MS base platform for indoor/outdoor unit complete with epoxy painting, vibration isolation pads, support hangars, railing, brackets, canvass connection with zip for ductable indoor units etc and other accessories as per the specs along with lifting & shifting. The quoted price shall be inclusive of full charge of additional refrigerant gas.				
1.1	VRV OUTDOOR UNITS				

	Installation of below mentioned capacity only				
1.1.1	40 HP	No.	1		
	25 HP	No.	1		
1.2	VRV INDOOR UNITS (IDU)				
	Indoor Units of Ductable / Cassette / Hi-wall type				
	Ceiling mounted Ductable, Cassette & Hi-wall type indoor units with , fan of whisper quietness, compact cooling coil, electronic expansion valve, suction air grill, drain pump,woven type filters etc.				
	All the valve packages to be included in the quotes				
	Installation of below mentioned capacity				
1.2.1	4Way Cassette units (Standard size)				
1.2.1.1	3 TR (CONFERENCE ROOM-2 + GM CABIN-1 + STAFF AREA-6 + GM CABIN-1)	Nos	10		
1.2.1.3	1.5TR (DISCUSSION ROOM -2 +STAFF WORKSTATION -3 + SECRETARY ROOM & PASSAGE-1 + LAW.DEPT- 1+VIGILANCE DEPT-2 + WAITING AREA-1)	Nos	10		
1.2.1.4	1.0 TR (AGM CABIN-4 + ANTI ROOM-2)	Nos	6		
1.2.1.8	2 TR (HR DEPT-1)	Nos	1		
1.3	Installation & Testing of Refrigerant Joints for Indoor and Outdoor Units	Lot	1		
2.0	Refrigerant Piping & Electrical works of VRV system				
2.1	COPPER Refrigerant Piping of make : Mandev / Nissan / Rajco /Equivalent				
	Hard /Soft Copper Ref.piping in pair of the required sizes for all the units with refnets as per specs. The insulation shall be of 19mm 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 channel. (1 Rmt of pipe length considering liquid & gas pipe together)				
	The pipe sizes are tentative, the vendors have to consider as per their manufacturing standards.	Rmt	260		
2.2	Control Wiring of make : Polycab / CCI / finolex / Havelles				
	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.				
	(3 core x 0.75 Sq mm cu.cable)	Rmt	300		
2.3	Power Cabling for VRV Indoor units of make : Polycab / CCI /Equivalent				
	FRLS Power cabling with earthing for indoor units from power point provided within 2mtrs. of unit (Power plug for indoor units to be considered in the rate)				
	(3 Core x 2.5 sqmm)	Rmt	60		
2.4	Power Cabling for VRV Outdoor units of make : Polycab / CCI /Equivalent				
	Power cabling with earthing from MCB to outdoor unit by means of GI cable trays of the required gauge as the cabling will have open exposure to atmosphere. The cabling shall be well supported at specific intervals with GI cable tray & angles frame work and screwed to wall with anchor fasteners. (2mtr each unit)				
	(4 Core x 16/12 sqmm)	Rmt	20		
2.5	Supply, installation, testing & commissioning of following MCB with ELCB in 16 SWG sheet steel enclosure duly painted and gasketed of IP-55 construction suitable for outdoor installation with provision for terminating of incoming and outgoing cables.				
	a. For VRV outdoor units . Amp rating of required size	No.	2		
3.0	Enclosure/Sleeves for Refrigerant piping / Cabling				

	Provide adequate size enclosed GI cable tray of 18 Gauge to cover and protect the exposed refrigerant pipes and cabling for all the VRV units. Provide necessary sleeves for all wall and roof penetrations along with UV protection to prevent degradation. The same shall be with polyshield coating of atleast 2 coats of resin & hardner (ploybond make / equivalent).	Rmt	30		
4.0	Drain Piping for Packaged units Make : Supreme / Prince				
	Drain Piping shall be Hard PVC.25mm dia for single unit, 40mm dia for two units and 50mm dia for 3 units. Drain Piping shall be insulated with 12mm Armaflex.	Rmt	140		
5.0	VENTILATION FANS				
5.1	Supply, Installation,Testing & Commissioning of circular / rectangular inline fans as shown on drawings, complete with sheet metal casing, direct driven centrifugal fan, motor with proper protection & flexible connection. Fan should be suitable for operation on 230 volts, 50Hz, supply as required. Fan shall be suitable for installation in shaft or as shown on drawings and shall be of following capacities. Necessary electrical cabling from power supply to unit to be included in quoted price (max 2 mtr).				
	The fan shall have low sound level exceeding not more than 40 DB at three metre distance.				
	Fresh Air & Exhaust Fans with cowl & bird screen				
5.1.1	Fresh Air In-line Type fan with filter of 600 CFM @ 20 mm SP (For Cassette unit)	No.	2		
6	Supply, Installation, Testing & Commissioning of PROPELLER type Exhaust Fan (For Toilet)	No.	2		
7.0	Providing, fixing, jointing, testing and commissioning of PVC pipe (Pipe 4 kg / sq.cm) cut to required lengths including all necessary fittings and specials such as bends, junctions offsets, access pieces. Fixing at wall / ceiling level supported by G.I. clamps, hangers etc. As per following diameters. 100 mm Dia buterfly valve shall be provide in each individual branch connecting to cassette units. It shall be included in quoted price.				
7.1	100 mm Dia	Rmt	60		
7.2	200 mm Dia	Rmt	180		
8.0	Supply & installation of Insulated flexible duct with Jubilee clips & aluminum foil tapes Make : Cosmic / Seven Star / Equivalent. (For Cassette unit fresh air connection)				
8.1	100 mm Dia	Rmt.	50		
SUB TOTAL B					
TOTAL					
GRAND TOTAL (A+B)					
GST WILL BE EXTRA 18%					