

## PRICE-BID

NAME OF WORK : INSTALLATION OF VRV BASED HVAC SYSTEM AT STATE BANK OF INDIA, VIRTUAL RELATIONSHIP MODULE (SBI PREMIERE), URBAN ESTATE, PATIALA					
Sr. No.	Description of work	Unit	QTY	Rate	Amount
	<b>Variable Refrigerant Volume System</b>			<b>EXCLUDING GST</b>	
	Supplying, installation, testing and commissioning of Air Cooled VRV/VRF units with scroll Compressor capable of modulating capacity i.e. it should be able to vary speed of the compressor as per the varying load conditions and works on R410A with heating & cooling both. The outdoor unit shall be a factory assembled unit housed in a sturdy weather proof casing constructed from rust-proofed mild steel panels coated with powder coated finish. The outdoor unit shall have scroll compressors and be able to operate even in case of breakdown of one of compressor. Each unit shall be equipped, with an oil separator to ensure stable operation with long refrigerant piping etc. Condensor Shall have with Hydrophobic Coating and Corrosion Resistance Black Coated Fin. All compressor shall have inverter technology i.e. outdoor units shall have all inverter based compressor. The manufacturer of ODU and compressor shall be same. i.e the make of compressor shall be identical of the ODU. All Bidders has to submit the test certificates along with the delivery of VRF/VRV Units at site. A draft Format of the same need to be submitted along with in the Technical Bid. All compressor shall have inverter technology i.e. outdoor units shall have all inverter based compressor. (Chinese Manufacturing Machinery is not Acceptable)				
1	<b>Outdoor Unit</b>				
	Supplying, Installation Testing and Commissioning Including vacuumising, Gas charging of Modular type outdoor units equipped with highly efficient scroll compressors, with all Inverter Scroll type compressor(s), special acrylic pre-coated heat exchanger, low noise condenser fan, auto check function for connection error etc, centralized controller for individual control complete as per OEM specifications of Following Capacity. COP of system 3.7 at 100% load & 7.50 at 50% at AHRI conditions. The manufacturer of ODU and compressor shall be same. i.e the make of compressor shall be identical of the ODU. All Bidders has to submit the test certificates along with the delivery of VRF/VRV Units at site. A draft Format of the same need to be submitted along with in the Technical Bid. (Chinese Manufacturing Machinery is not Acceptable)				
	All compressor shall have inverter technology i.e. outdoor units shall have all inverter based compressor.				
	<b>Make- LG / DAIKIN / HITACHI / VOLTAS /BLUE STAR</b>				
i)	44 HP ODU (24 HP+20HP ODU) Top Discharge	2	Nos.		-
2	Supplying, installation, testing and commissioning of below mentioned capacity <b>4 Way Cassette</b> indoor unit of air conditioners complete with fan and fan motor, controls, drain Pump etc. as per specifications and drawings. (Chinese Manufacturing Machinery is not Acceptable)				
	<b>Make- LG / DAIKIN / HITACHI / VOLTAS /BLUE STAR</b>				
i	4 Way Cassette Unit - 2.02 TR	9	Nos.		-
ii	4 Way Cassette Unit - 3.50 TR	16	Nos.		-
3	Supplying, Installation, Testing and commissioning of Imported fittings (Ref Net) Y-joints etc as per specifications as required complete in all respects. (Chinese & Third Party Manufacturing Y-Joint are not Acceptable)	32	Nos.		-
	<b>Make- LG / DAIKIN / HITACHI / VOLTAS /BLUE STAR</b>				
4	<b>Remotes</b>				
i	Supplying, Installation, Testing and commissioning of Cordless Remote reqd. to operate the indoor Cassette & Hi-Wall units as per specification mentioned in the bidding document and as per standard guidelines etc. as required.	25	Nos.		-
ii	Supplying, Installation, Testing and commissioning of Centerlised Remote Controller Touch Screen Type, Each CRC controll 64 nos. of Indoor units as per specification mentioned in the bidding document and as per standard guidelines etc. as required.	1	Nos.		-
	<b>Make- LG / DAIKIN / HITACHI / VOLTAS /BLUE STAR</b>				

5	Design & supply of refrigerant copper piping insulated with 19 mm / 13 mm thick Nitrile rubber of following sizes between outdoor units & indoor units as per the specifications. The refrigerant pipe shall be hard drawn / soft drawn copper pipe as per manufacture recommendations. The quantity of these items of works shall be measured as per actual measurements at site. The quantities of refrigerant pipes shown below are tentative. The required size of pipe shall be designed by the vendor as per the manufacturer recommendations.				
i	41.3 mm O.D.(insulation : 19 mm)	80	Mtrs.		-
ii	31.8 mm O.D.(insulation : 19 mm)	70	Mtrs.		-
iii	28.6 mm O.D.(insulation : 19 mm)	70	Mtrs.		-
iv	22.2 mm O.D.(insulation : 13 mm)	110	Mtrs.		-
v	19.1 mm O.D.(insulation : 13 mm)	110	Mtrs.		-
vi	15.9 mm O.D.(insulation : 13 mm)	250	Mtrs.		-
vii	12.7 mm O.D.(insulation : 13 mm)	145	Mtrs.		-
viii	9.5 mm O.D.(insulation : 13 mm)	220	Mtrs.		-
ix	6.3 mm O.D.(insulation : 13 mm)	70	Mtrs.		-
6	Supplying, installation, testing and commissioning of following sizes of rigid PVC piping complete with elbow T-joint, socket duly supported as per specifications and insulated with 6mm thick closed cell nitrile rubber insulation.				
	Makes: Supreme, Finolex, Diplast				
i	25 mm Dia	100	Mtrs.		-
ii	32 mm Dia	125	Mtrs.		-
7	Supplying and installation following size of perforated pre-painted M.S. cable trays with perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required complete in all respects.				
i	150mm (wide) x 50mm(depth) x 1.6mm (thick)	10	Mtrs.		-
ii	300mm (wide) x 50mm(depth) x 1.6mm (thick)	10	Mtrs.		-
	Make:Tristar/Caryaire/Ravistar/Uniaire				
8	Providing & fixing control cum transmission wiring of 2 core x 1.5 sqmm copper in suitable PVC conduits between indoor and out door unit.	550	Mtrs.		-
	Make: Havells/ Finolex/ Polycab				
9	Wiring for Indoor Units:				
	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required, including the cost of providing & laying PVC conduit of appropriate size, complete in all respects	500	Mtrs.		-
	3 x 2.5 sq. mm				
	TOTAL Item No.-1 to 9				-
10	BUY BACK OF OLD MATERIAL:				
	Dismantling & removal of old VRV Outdoor units as per instructions of Engineer in charge / Architect. <i>(It is at the discretion of the Bank to allow the ODU's as buy back or not.)</i>	3	no.		-
	TOTAL (1 to 9) - 10				-
	<b>GST EXTRA AS APPLICABLE</b>				