VRF System BOQ (High Side)					
PROJECT:-HVAC WORK FOR GROUND FLOOR, VASHALI NAGAR BRANCH, JAIPUR, STATE BANK OF INDIA					
S.No.	**Description of Items.**	**Unit**	**Qty.**	**Rate**	**Amount**
				In INR	**In INR**
1	Design and Supply of Flexi system **Variable refrigerant flow** air-conditioning system suitable for **Cooling** by inverter driven capacity control Scroll compressor complete with indoor and outdoor units with individual controller and with fittings etc., as per quantity given below i/c full charging of R-410A refrigerant gas complete with duly powder coated and Outdoor unit. **Make:- Daikin, Voltas, Carrier (No Midea).**				
A)	**Outdoor Units**				
a	12 HP	Nos	1		-
b	18 HP	Nos	1		-
B)	**4-Way Cassette Type Units (Including wireless Remote)**				
i)	Round Flow Cassette Type - 1.5 TR + Cordless Remote + Joint	Nos	1		-
ii)	Round Flow Cassette Type - 2.08 TR + Cordless Remote + Joint	Nos	4		-
iii)	Round Flow Cassette Type - 3.0 TR + Cordless Remote + Joint	Nos	2		-
iv)	High Static Ductable units (78 pascal or above external static pressure) 8.0 TR + Cordless Remote + Joint	Nos	1		-
2	**Supply of Hi-Wall (COOLING ONLY) Type** Air Conditioners complete with indoor and outdoor unit with cordless remote. **R-32 , Including floor / wall mounted stand.**				
	1.5 TR with Rotary Compressor (5 Star) INVERTER	Nos	2		-
3	Supply of refnets for above system circuit	Lot	1		-
	Total Basic Amount for Supply of Equipment				**-**

Low side /Installation work					
1.	**Installation & Commissioning**				
	Installation, testing and commissioning of variable refrigerant flow modular type airconditioning system complete with indoor and out door units with individual controller and with refrigerant piping, control cabling.				
A)	**Outdoor Units**				
a	12 HP	Nos	1		-
b	18 HP	Nos	1		-
B)	**4-Way Cassette Type Units (Including wireless Remote)**				
a	cassette type units	Nos	7		-
b	Hi Wall	Nos	2		-
c	High Static Ductable units (78 pascal or above external static pressure) 8.0 TR + Cordless Remote + Joint	Nos	1		-
2	**Refrigerant Copper Piping**				
i)	Supply , Installation , Testing and commissioning of interconnecting refrigerant pipe work with closed cell elastomeric nitrile rubber insulation between each set of indoor & outdoor units as per specifications.				
	Liquid Line-As per manufacturer specification	Rmt	160		-
	gas line-As per manufacturer specification	Rmt	160		-
	Supply , Installation , Testing and commissioning of interconnecting refrigerant pipe work with closed cell elastomeric nitrile rubber insulation between each set of indoor & outdoor units as per specifications.	Rmt	100		-
3	Installation, testing, commissioning of Y-joints/T-joints	Nos.	6		-
4	**Control & Transmission Wiring**				

i)	Providing & fixing control cum transmission wiring of 3 core x 1.5 sqmm copper in suitable conduits between indoor unit to out door unit and outdoor unit to central controller	Rmt	450		-
5	**Drain Piping**				
	Rigid PVC piping complete with fittings, supports as per specifications and duly insulated with 6 mm thick closed cell nitrile rubber insulation. VRF as per manufacturer specification				
i)	25 mm dia	Rmt	70		-
6.0	**Gas Charging**				
	Commissioning of VRV systems including topping R410A gas per site requirements	Lot	1		-
7	**MS Stand for Outdoor Units**	Nos	2		-
Total Basic amount For Installation					**-**
AIR DISTRIBUTION SYSTEM					
1.0	Supply, installation, testing and commissing of INLINE FANS for Exhaust (Fresh air fan shall be considered with filter). Each fan shall be complete with totally enclosed fan cooled motor, drive, motor mount & vibration isolators. Fan static pressure shall be 20mm WG.				
i)	100 CFM	No.	1		-
ii)	150 CFM	No.	2		-
iii)	200 CFM	Nos.	1		-
4.0	SITE FABRICATED DUCT				

4.1	Supply, fabrication, installation, and testing of site Fabricated ducts of following thickness including necessary supports flexible hangers with isolators, nut bolts, gasket, splitter damper,duct dampers, vanes, etc. complete as per specifications in accordance with the approved shop drawings.				
	VENTILATION DUCT				
i)	24 gauge galvanised sheet	Sqm	23		-
5.0	Supply, fabrication, installation, and testing of canvas flexible connection constructed of fire resistant material as per the drawings /specifications.	Nos.	9		-
6.0	GRILLE / DIFFUSER				
6.1	Supply, installation, testing and commissioning of terminal air distribution equipment as per approved shop drawings, colour and specifications.				
a)	Powder Coated aluminium zet nozzle dia 250 mm	Nos.	6		-
b)	Powder Coated aluminium linear grille	Sqm	2		-
c)	Fresh air intake / exhaust louvers with bird screen.	Sqm	1.5		-
d)	Aluminium powder coated exhaust air grille for toilet exhaust of dia 100 mm	Nos.	8		-

7	Providing and fixing uPVC pipe (IS: 13592 Class B) including all fittings e.g. bends, junction, offsets, access pieces, jointing with solvent cement/rubber rings, including pipe support/angle/channels from ceiling, including cutting chase or holes in walls and floors and making good where required. (for exhaust pipe inside the building)				
	160 mm dia	RM	15		-
	110 mm dia	RM	15		-
Total Basic amount For Air Distributation System					**-**
THERMAL INSULATION					
1	DUCT INSULATION				
1.1	Supply, installation & testing of duct insulation with 13mm thick Nitrile Rubber insulation (Density 50-60 kg/m³) on supply air ducts.	Sqm.	22		-
Total Basic amount For Thermal Insulation					**-**
F	**AC DRAIN PUMP (FOR HI WALL)**				
	Supply & Testing of condensate drain pump : - Motor power : 22 W (Max power of AC 8 kW) - Voltage : 220 - 240 V - Maximum pumping height : 6 m - Maximum flow rate : 15 L/H - Number of inlets : 1 - Tank capacity : 0.2L - Inlet diameter : 22 mm ext. - Discharge pipe : 8 - 10 mm **Make: SFA Pumps (Made in France) Marketed by : Unitech Energy, Jaipur /Max hi flow /Wipcool**	Nos.	2		-
	Total Basic amount For AC				**-**
	TOTAL				**-**