

**RENOVATION OF DIMAPUR BAZAR BRANCH
BOQ FOR VRF/VRV AIR CONDITIONING INSTALLATION WORK**

S. No.	Description	Qty.	Unit	Rate Rs.	Amount Rs.
1	Variable Refrigerant Volume / Flow System (VRF/VRV)				
	Supply of Variable Refrigerant Flow / Volume SYSTEM (VRF) (Cooling facility) comprising of 100% DC inverter based scroll compressor Outdoor unit only connectable to multiple indoor units as per specification. Outdoor units shall be factory assembled weather proof. Casing constructed from heavy gauge mild steel(sheet metal material is hot zinc plate & sheet metal thickness is 1 mm) ,must have 100% DC Inverter Scroll compressor in each module & with top Air discharge through. The outdoor unit should contain error code LED display for ease of operation. The system should be equipped with eco - freindly refrigerant R 410A. The system should be suitable for operation within the ambient temperature range of 40 to 56 deg The outdoor unit shall be complete with safety devices . The outdoor unit should be fitted with low noise fan with multiple speed DC motor and large air flow. The unit should also be capable to deliver at least 70pa external static pressure to avoid short cycling of hot exhaust air. t, Air-cooled condenser along with in built Micro Processor Panel. Units should be capable to handle incoming voltage fluctuation during operation it should have a voltage operting range from 320V - 460 V 3 phase 50Hz, balanced volt. Considering the long length piping the unit should have a good oil management system to ensure reliability. The unit should have oil separator to ensure oil recovery in the system. To maintain the oil balance in the system the units should have a facility of swapping the oil on the next ODU on a regular basis. Units should capable to operate on very low load condition upto 5%. To handle extreme climatic condition, corrosion and polluted atomshpheres unit should have powder coated GI sheet metal cabinets,all hardware of anti rust quality,conformal coating on PCBs to protect from dust and humidity,hydrophilic blue fins for better corrosion resistance, weather - proof enclosures for critical components. The minimum COP of the modules should be 3.5 at 100% load at ARI conditions. Units should be of 5th generation variant. VRF Unit should Be Compiatble with AHU/TFA..				
	Outdoor Unit				
a.	26 HP	1	Nos		
2	Indoor Units				
	Supply of ductable type unit of following Capacities. The unit is having inbuilt drain pump.				
a.	Capacity 11 TR	2	Nos		
3	Supply of Refnet Joints (Y-Branch)	2	Nos.		
4	Supply, Installation and commissioning of 1.5 TR Capacity Hi Wall mounting 5-star rated Inverter Split AC with cordless remote and Copper Condensor Coil. AC Make, Voltas/Bluestar /Carrier/Daikin /LG/Godrej(INCLUDING 3 M COPPER PIPES) Coiland refrigerant(R32 or R 410A)	1	Nos.		
5	"Supply of 2.0 TR 4-way Cassette Type Inverter AC, 5 STAR with Copper Condensor Coiland refrigerant (R32 or R 410A) Indoor unit ceiling hung comprising cooling coil, evaporator fan with motor, filters, insulated drain pan, drain pump, expansion valve, refrigerant filter drier with codeless remote control unit, etc. Outdoor unit comprising single phase hermetically sealed scroll / rotary compressors, condenser coil with fan & motor, starters / controls / cutouts / relays etc., mounted inside a powder coated sheet metal cabinet of 2mm thick, duly treated for corrosion protection complete, mounted on ribbed rubber pads. AC Make, Voltas/Blue Star/Carrier/Daikin /LG"	3	Nos		

S. No.	Description	Qty.	Unit	Rate Rs.	Amount Rs.
6	"Supply of 3.0 TR 4-way Cassette Type Inverter AC, 5 STAR with Copper Condensor Coil and refrigerant (R32 or R 410A) Indoor unit ceiling hung comprising cooling coil, evaporator fan with motor, filters, insulated drain pan, drain pump, expansion valve, refrigerant filter drier with codeless remote control unit, etc. Outdoor unit comprising single phase hermetically sealed scroll / rotary compressors, condenser coil with fan & motor, starters / controls / cutouts / relays etc., mounted inside a powder coated sheet metal cabinet of 2mm thick, duly treated for corrosion protection complete, mounted on ribbed rubber pads. AC Make, Voltas/Blue Star/Carrier/Daikin /LG"	1	Nos		
7	Supply of group controller having touch screen based user friendly controller upto 2 indoor units and 1 systems can be controlled , parameters for individual indoor units can be set, remote shielding of machines can be performed, parameters like on/off status ,mode of operation temp setting can be viewed and set.	No	1		
8	Installation, Testing & Commissioning of 2.0/3.0 Tr cassette Air conditioning Unit	4	No		
9	VRF/VRV System				
	Installation, testing and commissioning (Including Lifting at roof level) of variable refrigerant volume type air conditioning system complete with indoor and outdoor units with individual controller and with refrigerant piping, control cabling, MS channel for mounting of outdoor units with rubber pads as required including pressure testing & flushing of pipeline system with nitrogen, etc. as per as per detail given in specifications and having following items:				
	Outdoor Unit				
a.	26 HP	1	Nos		
10	Installation, testing and commissioning of Ductable type unit of following Capacities.				
a.	Capacity 11.0 TR	2	Nos		
11	Installation, Testing & Commissioning of Refnet Joints (Y-Branch)	2	Nos.		
12	Refrigerant Pipe				
	Supply, installation, testing & commissioning of interconnecting refrigerant copper pipe (Hard/ Soft) work with 19mm/ 13mm thick closed cell tubular nitril rubber insulation between each set of indoor & outdoor unit for suction and liquid line as per specifications, all piping inside the room shall be properly supported on with MS/GI Studs/ Clamps/ Hanger as per specification and drawings.				
a.	34.90 mm O.D.(insulation : 19 mm) (Wall Thickness 1.2mm)	90	Rm		
d.	19.05 mm O.D.(insulation : 13 mm) (Wall Thickness 1.0mm)	90	Rm		
e.	15.88 mm O.D.(insulation : 13 mm) (Wall Thickness 1.0mm)	40	Rm		
g.	09.52 mm O.D.(insulation : 13 mm) (Wall Thickness 0.8mm)	40	Rm		
h.	06.35 mm O.D.(insulation : 13 mm) (Wall Thickness 0.8mm)	8	Rm		
13	Drain Piping				
	Supply & installation of CPVC piping complete with fittings, supports and duly insulated with 9 mm thick closed cell nitril rubber insulation.				
a.	25 mm dia	50	Rm		
14	Control & Transmission Wiring				
	Providing & fixing control cum transmission wiring of 2 core X 1.5 sqmm shielded copper cable in suitable conduits between indoor and outdoor unit and between corded remote and indoor unit.				
a.	2 core X 1.5 sqmm shielded	120	Rm		
15	Duct work				
a.	Supply & fabrication of 24G (Tata) GI sheet rectangular duct complete with MS angle support as required etc complete as per IS 655.	120	Sqm		
16	Supply and fixing of thermal insulation with 13mm thick nitril insulation	90	Sqm		
17	Supply and fixing of duct acoustic insulation with 25 mm thick glass-wool with AL perforated sheet for duct plenum.	40	Sqm		
18	Supply and fixing of canvas connection in the Ductable IDU and duct	2	Nos		
19	Supply and fixing of Aluminium Grill/Diffuser for supply air and R/A				

S.	Description	Qty.	Unit	Rate	Amount
No.				Rs.	Rs.
a.	with damper (600x600 mm)	10	Sqm		
b.	Without damper	10	Sqm		
20	Refrigerant Gas				
	Supply of R-410A Refrigerant Gas	21	KG		
21	Carefully Removal of Existing Air Conditioning and stored in place specified by Bank's Authority	1	lot		
	Grand Total				