

**SHIFTING OF NALAPETH BRANCH, PARBHANI
AIRCONDITIONING WORKS : BOQ**

Sl.No	Item Description	Qty.	Unit	Rate
1	VRF OUTDOOR UNITS			
	Supply of modular type single VRF (Variable Refrigerant Flow) Side/ Top Discharge Outdoor units equipped with single / multiple high efficient DC twin rotary/ scroll ALL INVERTER type Compressors with R410A refrigerant, special acryl pre- coated heat exchanger, low noise condensor fan, Microprocessor controller for auto check function for connection error, auto address setting of capacities and quantities, complete with all accessories and electrical and mechanical protections of the following Capacities. (Supply only)			
	16 HP with Multiple 3 Phase All Inverter Compressors	1	Set	
2	INDOOR UNITS FOR THE ABOVE VRF OUTDOOR UNITS			
	Supply of ceiling mountable 4 way Cassette type / Hi Wall type indoor units with compact cooling coils, electronic expansion valve and multispeed fan motor. The blower shall be dynamically balanced and designed for silent operation, with induit drain pump.			
a	2.4 TR (3 HP) , 4 Way Cassette type with cordless remote. (Banking Hall)	3	Nos.	
b	1.6 TR (2 HP), 4 Way Cassette type with cordless remote. (Banking Hall)	3	Nos.	
c	0.8 TR (1 HP) Hi wall type Indoor Unit with cordless remote.	1	Nos.	
3	Supply of 1 Tonne 5 Star Inverter type Hi wall Split Airconditioner for meeting Room (with copper piping and interconnecting power/communication cables upto 3metre) (High Wall Split AC).	2	Nos.	
4	Supply and installation of good quality fully digital Centralised Touch Screen remote controller Station with power supply adaptor. (Touch screen remotes with bulky power supplies will not be accepted).	1	No.	
5	Charges for lifting/leading the 16 HP VRF Outdoor Units to the Terrace of the G+3 storied building by suitable means including all expenses and cost machineries if any required.	1	Job	
6	Charges for Installation, Testing and Commissioning of modular type VRF (Variable Refrigerant Flow) Side / Top Discharge Outdoor units. Cost should include pressure testing, gas charging and commissioning of total VRF System and excluding cost of indoor units, piping and ducting. (The quoted rate should include loading, transportation, unloading, leading and installation on ground level)			
	a) 16 HP with Multiple 3 Phase All Inverter Compressors	1	Set	
7	INDOOR UNITS FOR THE ABOVE VRF OUTDOOR UNITS			

Sheet1

	Installation, Testing and Commissioning of ceiling mounted 4 way Cassette type / Hi Wall type indoor units. The Cassette type IDUs to be installed on ceiling using threaded rods on four corners. The quoted rate shall include the cost for the same. (The quoted rate should include loading, transportation, unloading, leading and installation on desired floor level)			
a	2.4 TR (3 HP) , 4 Way Cassette type with cordless remote. (Banking Hall)	3	Nos.	
b	1.6 TR (2 HP), 4 Way Cassette type with cordless remote. (Banking Hall)	3	Nos.	
c	0.8 TR (1 HP), Hi wall type Indoor Unit with cordless remote.	1	Nos.	
	Note: The Cassette IDUs has to be mounted on threaded rods suspended from ceiling upto the false ceiling level. (For any ceiling height)			
8	Installation, testing and commissioning of 1.0 Tonne 5 star inverter Split AC units.	2	Nos.	
9	Supply and and laying of additional refrigerant line (double circuit) and interconnecting power/communication cables beyond 3 metre for Split Airconditioners and its neat insulation using nitrile rubber sleeve with teflon taping.	10	Mtr.	
10	Supply and installation of powder coated ready made metallic stand for mounting ODU of Split Airconditioners.	2	Nos.	
11	Supply and Installation of 4 kVA V-Guard Stabiliser with metallic enclosure.	2	Nos.	
13	Supply and installation of VRF copper T & Y-Joints (pair) for refrigerant piping with insulation for IDUs & ODUs .	6	Pair	
14	Supply and installation of hard drawn copper piping in brazed construction (double circuit ie; Suction + Discharge) of appropriate dia (as specified by manufacturer) with all accessories and insulated with Nitrile Rubber Tubular Insulation of 19mm thickness (both suction and discharge lines); including vacuumising and pressure testing. The insulated refrigerant lines and insulated drain piping has to be supported at every 2 metre intervals using slotted channels suspended from ceiling using threaded rods. (Floor height is around 17 ft).	80	Mtr.	
15	Supply and installation of 16 SWG perforated GI Trays of the following width supported at 1 Mtr. Interval using hanging threaded rods and slotted cross channels.			
a	300 mm Wide	10	Mtr.	
16	Fabrication, Painting (two coats over zinc chromate primer), Supply and Installation of suitable and strong metallic stand (stool type) of 30cm height for mounting the VRF outdoor units. Pedestal concreting to be done around four legs.	1	Nos.	
17	Supply and laying of 2 core x minimum 1.5 sq mm shielded Copper Control Cabling through 20mm dia rigid PVC conduits with saddles/supports & to connect VRF outdoor units with respective indoor units. Sheilding to be grounded on both ends for each circuit. The conduit shall be laid along the supports for refrigeration and drain lines.	120	Mtr.	

Sheet1

18	Supply and laying of 25mm dia Rigid PVC drain piping insulated with 6mm thick nitrile rubber foam sleeve insulation and necessary rigid support & all accessories elbow, bends, tees etc.	80	Mtr.	
19	Charges for preparation of refrigerant piping layout including indoor and outdoor unit locations, specifications and refrigerant line dia and Y - T joint locations and tray details; its lamination and fixing at convenient location.	1	Job	
20	Supply and Installation of 1 to 12 hr user selectable timer for alternate operation of Airconditioners.	1	Nos.	
(I) GRAND TOTAL : (COST OF AIRCONDITIONING WORKS) EXCLUDING GST				
21	All Inclusive Comprehensive Annual Maintenance Contract for 5 years after warranty period of one year. During the AMC Period, the AMC provider has to provide quarterly water servicing in addition to attending any number of breakdown calls. The cost of all spares and consumables including the Compressor, Condensor coil etc. required to keep the 15 TR units in perfect working condition has to be borne by the AMC Provider. (The Contractor shall provide a laminated sheet containing their Name, Address, Contact No., Date of Installation, Warranty period, AMC Rates (for each year separately) after warranty etc and to be fixed to the wall using screws at a dominant place inside the Office near central remote controller).			
a	1st year after Warranty Period	15	Tonne	
b	2nd Year after Warranty Period	15	Tonne	
c	3rd Year after Warranty Period	15	Tonne	
d	4th Year after Warranty Period	15	Tonne	
e	5th Year after Warranty Period	15	Tonne	
TOTAL AMC CHARGES FOR 5 YEARS AFTER WARRANTY PERIOD OF ONE YEAR & EXCLUDING GST				

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