

TECHNICAL SPECIFICATION&SCC

1. VRF/VRV outdoor system

Full Inverter (Variable Refrigerant Flow (VRF)/ Variable Refrigerant Volume(VRV) air-conditioning system comprising of modular type high efficiency all inverter technology based on outdoor unit of minimum capacity, 80 TR with hermetically sealed compressors operating on R-410A or equivalent refrigerant suitable for operation on 415V, 3phase,50Hz Ac supply , interconnecting piping, suction line insulation etc, microprocessor control panel suitable for automatic operation, high speed inverter control mechanism incorporating all safety function including unit mounted starter panel complete with IP-55 protection consisting of power disconnecting switches, starters for compressor motors, under voltage/over voltage trip, single phase preventers, stand for ODU etc. including supply of all the required items for Installation, commissioning and smooth operation of the system.

2. VRF/VRV AC system

Indoor Units Supply of VRF/VRV AC system Indoor Units of minimum capacity 79 TR (as mentioned in bid document) including cordless controller and all the required items for Installation, commissioning, and smooth operation of the System.

Special Conditions of Contract

Job Name: Supply Installation and Commissioning of AC system for Circle Office, Tirupati.

PRE-QUALIFICATION CRITERIA (PQC):

Bidder must meet the following for their bid to be considered for technical evaluation.

- a) The bidder should be either a manufacturer (OEM) of VRF/VRV AC system or their authorised dealer. Bidder to furnish proof of manufacture. Bidders who are Dealer's, must furnish valid authorization from OEM /Dealership certificate.
 - b) The manufacturer (OEM) should have service centre for regular maintenance at Tirupati, Andhra Pradesh. Bidder must furnish GST registration for the stated service location.
 - c) The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied "Minimum 60 TR capacity VRF/VRV AC system" to any Central / State Govt Organization / PSU / Public Listed Company for last 3(Three) financial years in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid.
- 1) Engineer-In-Charge: TFO Sh B LEELA ROHIT will be the engineer-in-charge (EIC) for the job.
 - 2) Site Address of the Project: All materials shall have to be delivered at the following site address as per the scope of the contract –

CANARA BANK CIRCLE OFFICE TIRUPATI
3RD FLOOR, KVC ARCADE, VANI NAGAR, R C ROAD,
AVILALA, TIRUPATI – 517 507

- 3)** Delivery Schedule: 25 days from the date of PO. Supply: Within 25 days from the date of award of contract. Installation and commissioning: Within 10 days of date of delivery of material at site.
- 4)** Payment Terms: 100% payment within 20 days after receipt and acceptance, installation & commissioning of the system at site.
- 5) Scope of Work:**
 - i.** Bidder shall visit the site for understanding the scope and proper estimation and aesthetic layout of the accessories like various types of power and instrument cables, various types of tubes and pipes, joints, MS stand etc. or any other accessories required for Installation and commissioning of the system.
 - ii.** Materials have to be supplied in complete as per the "Schedule of Rate" / "Purchase Order".
 - iii.** Bidder has to provide proper test reports, manuals etc for all the items to be supplied as per contract.
 - iv.** Transportation, loading & unloading of materials are in scope of the supplier.
 - v.** The Bidder to connect the drain pipe to the existing drainage system. All the scope of work along with supply of required pipe is in bidders scope.
 - vi.** All the labour required for supply, Installation and commissioning is in the scope of bidder.
 - vii.** Bidder shall follow all the safety norms during Installation and commissioning of the system.
 - viii.** Provision for foundation for Equipment, cutting & making good of holes in walls, floor/ceiling slabs shall be in the scope of Bidder. Floor core cutting to be done engaging specialized tool/agency without damaging the area surrounding the core.
 - ix.** Bidder shall supply one cordless controller for each Indoor unit supplied for the system.
 - x.** Warranty: 12 months from the date of Installation.

PROJECT: BOQ FOR AIR CONDITIONING WORK FOR CANARA BANK CIRCLE OFFICE AT TIRUPATI

S.NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SUPPLY OF MIDEA/HITACHI/MITSUBHISHI/PANSONIC OR EQUIVALENT AIR COOLED VARIABLE REFRIGERANT VOLUME TOP DISCHARGE VRF OUTDOOR UNIT, SUITABLE FOR 415 ± 10% OR 230 ± 5% VOLTS, 50 CYCLES. THE UNIT SHALL CONSIST OF 100% INVERTER SCROLL COMPRESSORS, COOLING HEATING & ONLY, R410A GAS.				
1.1	20 HP /16.6TR	NOS.	0		
1.2	22 HP /18.3 TR	NOS.	2		
1.2	24 HP /20 TR	NOS.	2		
2.2	1 TR SPLIT AC FOR SERVER	NOS.	2		
2	INDOOR UNITS				
	SUPPLY OF INDOOR UNITS, EVAPORATOR COIL, FAN AND FAN MOTOR DRAIN PAN. THE UNITS SHALL BE OF FOLLOWING CAPACITIES :				
2.1	HI WALL UNIT INCLUDING CORDLESS REMOTE				
2.1.1	1.25HP / 1.0 TR	NOS.	5		
2.1.2	2.0HP/ 1.6 TR	NOS.	5		
2.1.3	2.5HP / 2.0 TR	NOS.	3		
2.2	4 WAY CASSETTE UNIT INCLUDING CORDLESS REMOTE				
2.2.0	2.7 HP /2.0 TR	NOS.	1		
2.2.1	3.6 HP /3.0 TR	NOS.	6		
2.2.2	4.8 HP /4.0 TR	NOS.	10		
	SUB TOTAL				
	ADD GST @ 28%				
	TOTAL VALUE FOR SUPPLY OF ABOVE ITEMS(INR)				

S.NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	INSTALLATION OF MIDEA/HITACHI/MITSUBHISHI/PANSONIC OR EQUIVALENT AIR COOLED VARIABLE REFRIGERANT VOLUME TOP DISCHARGE VRF OUTDOOR UNIT, SUITABLE FOR 415 ± 10% OR 230 ± 5% VOLTS, 50 CYCLES. THE UNIT SHALL CONSIST OF 100% INVERTER SCROLL COMPRESSORS, HEATING & COOLING, R410A GAS.				
1.1	20 HP /16.6TR	NOS.	0		
1.2	22 HP /18.3 TR	NOS.	2		
1.3	24 HP /20 TR	NOS.	2		
2.3	1 TR SPLIT AC FOR SERVER	NOS.	2		
2.1	HI WALL UNIT INCLUDING CORDLESS REMOTE				
2.1.1	1.25HP / 1.0 TR	NOS.	5		
2.1.2	2.0HP/ 1.6 TR	NOS.	5		
2.1.3	2.5HP / 2.0 TR	NOS.	3		
2.2	4 WAY CASSETTE UNIT INCLUDING CORDLESS REMOTE				
2.2.0	2.7 HP /2.0 TR	NOS.	1		
2.2.1	3.6 HP /3.0 TR	NOS.	6		
2.2.2	4.8 HP /4.0 TR	NOS.	10		
3	SUPPLY, INSTALLATION, COMMISSIONING OF INTERCONNECTING REFRIGERANT PIPE WORK WITH (19MM/13 MM THICK) CLOSED CELL ELASTOMERIC NITRILE RUBBER TUBULAR INSULATION BETWEEN EACH SET OF INDOOR & OUTDOOR UNITS AS PER SPECIFICATIONS, ALL PIPING INSIDE THE ROOM SHALL BE PROPERLY CLAMPED. THE PIPING SHALL BE OF FOLLOWING SIZE.				
3.1	31.8 MM OD (INSULATION 19 MM)	RMT	100		
3.2	22.2 MM OD (INSULATION 13 MM)	RMT	175		
3.3	19.1 MM OD (INSULATION 13 MM)	RMT	150		
3.4	15.9 MM OD (INSULATION 13 MM)	RMT	125		
3.5	12.7 MM OD (INSUALATION 13 MM)	RMT	400		
3.6	9.5 MM OD (INSULATION 13 MM)	RMT	150		
3.7	6.35 MM OD (INSULATION 13 MM)	RMT	400		

4	SUPPLY & INSTALLATION OF REFNET JOINTS/BRANCH DISTRIBUTORS, "Y' JOINT				
	FOR INDOOR & OUTDOOR UNITS.	NOS.	26		
5	CONTROL & TRANSMISSION WIRING				
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF CONTROL CUM TRANSMISSION WIRING OF COPPER IN SUITABLE PVC PIPES AS PER SITE REQUIREMENTS BETWEEN INDOOR UNITS AND THEIR REMOTE CONTROLLERS AND BETWEEN INDOOR AND OUTDOOR UNITS .	RMT.	750		
6	SUPPLY & INSTALLATION OF UPVC PIPE DULY INSULATED WITH 6MM THICK NITRILE RUBBER FOR CONDENSATE DRAIN				
6.1	25 mm dia.	RMT.	200		
6.2	32 mm dia.	RMT.	250		
7.2	50 mm dia.	RMT.	100		
7	SUPPLY AND INSTALLATION OF FABRICATED ANGLE IRON STAND FOR OUTDOOR UNITS	NOS.	6		
8	BRICK WALL CHASE CUTTING / MINOR CIVIL WORK	LOT	1		
9	PRESSURE TESTING				
	PRESURE TESTING AND VACUUMIZATION OF THE ENTIRE SYSTEM WITH NITROGEN ETC.	NOS.	4		
10	SUPPLY & FILLING OF INITIAL CHARGE OF REFRIGERANT GAS-R410/ GREEN GASS ETC.	KG	70		
11	LIFTING & SHIFTING OF IDU & ODU AC.(THRU CHAIN PULLEY TO THE ROOF FOR 02 NOS ODU)	NOS.	4		
	SUB TOTAL				
	ADD GST @ 18%				
	TOTAL VALUE FOR INSTALLATION OF ABOVE ITEMS(INR)				
	TOTAL PROJECT VALUE (INR) WITHOUT GST				
	TOTAL PROJECT VALUE (INR) WITH GST				