SCHEDULE OF QUANTITIES

Name of work: HVAC System for the Proposed DRT premises Bangalore VRF type Air-Conditioning System SNO DESCRIPTION QUANITTY UNIT AMOUNT RATE Supply, Installation, Testing and commissioning of Inverter control VRF type air-conditioning with high efficiency Scroll Compressors. The outdoor unit shall be designed to work on variable refrigerant circulation depending on the actual load sensing. The unit shall have minimum 2 Compressors each and all compressors capacity shall be variable in each outdoor module, in multi modular combination, together with avariable capacity compressors to deliver rated capacity. The variable capacity compressor shall be of inverter control as per manufacturer's design. The condenser coil and condenser fan shall be sized to work even at 52°C ambient without tripping. The condenser fins shall be coated with anti corrosive material for longer life. The unit shall have oil arrestor to prevent oil migration. Suction accumulator and liquid receiver shall be provided to balance variable refrigerant circulation. The unit shall also meet CPCB norms on noise and Air pollution levels etc., as required. The system shall operate with only two pipes i.e., suction and liquid line that can be connected to multiple indoor units. The intelligent microprocessor based control system shall maintain the communication between indoor and outdoor units to operate the compressors in most efficient way and to keep the equal running time for constant speed compressors. The unit shall work with only R 410A refrigerant gas and on 415V / 3Ph / 50Hz AC power supply. (All components shall be mounted on welded steel base frame, structural steel profiles/panels made out of galvanized sheet steel, protected with primary coat & finished with acrylic paint Including M.S Stand for ODU at Terrace level) Outdoor Unit (ODU) of following capacity, single or in combination of modular units and suitable electrical & Refrigerant interconnection, initial charge of refrigerant R 410 A and ready for use with single point Electrical supply & refrigerant suction/Liquid line tapping i/c topping up of refrigerant in the system etc. as required. The COP of the machine shall be Close to 4 . Make: Bluestar/Daikin/Toshiba/Carrier 16 hp (Cooling capacity 153600 BTU/hr) each Supply, installation, testing and commissioning of Ceiling Mounted following capacity Cassette type Indoor Unit with decorative panel, compact cooling coil, electronic expansion valve, three speed fan motors, dynamically balanced blowers, provision for Fresh Air Intake, drain pump, synthetic washable media filter including insulation and suitable for operation on single/three phase AC supply & remote control operation etc as required. Capacity 1.0TR (Cooling Capacity 12000 BTU/ HR) Hi wall split 4 each а Capacity 1.00 TR (Cooling Capacity 12000 BTU/ HR) COMPACT CASETTE С 4 WAY 600X600 DIMENSION 2 each Capacity 1.50 TR (Cooling Capacity 18000 BTU/ HR) COMPACT CASETTE 4 WAY 600X600 DIMENSION 14 each Capacity 2 TR (Cooling Capacity 24000 BTU/ HR) 4 WAY CASETTE 950X950 DIMENSION 6 each Capacity 3.00 TR (Cooling Capacity 36000 BTU/ HR) 4 WAY CASETTE 950X950 DIMENSION 8 each Supplying and fixing of following sizes of refrigerant pipe made out of hard drawn copper including accessories, jointing/brazing etc duly insulated with Class - 'O' nitrile tubular rubber sections to prevent condensation with suitable adjustable ring type hanger supports inside the building and with MS frame work made of 35 x 35 x x5 mm angle iron in the terrace i/c painting etc

equipment.)

complete as required. (The correct size of pipe has to be worked out by the vendor and the number of circuits for each floor shall match the vendors

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	VRF type Air-Conditioning System			1	
CNO	DESCRIPTION	QUANITTY	UNIT	DATE	AMOUNT
SNO (a)	41.30 mm OD with 19mm thick insulation			RATE	AMOUNT
(a)	41.30 Hilli OD With 19thin thick instration	RO	m		
(b)	34.90 mm OD with 19mm thick insulation	50	m		
` '					
(c)	28.60 mm OD with 19mm thick insulation	50	m		
(d)	22.20 mm OD with 13mm thick insulation	100	m		
(u)					
(e)	19.05 mm OD with 13mm thick insulation	10	m		
(f)	15.90 mm OD with 13mm thick insulation	110	m		
(1)	13.50 Hilli OD Willi 13Hilli tilick irisulation	110	111		
(g)	12.70 mm OD with 13 mm thick insulation	120	m		
(h)	9.50 mm OD with 13 mm thick insulation	75	m		
(i)	6.35 mm OD with 13 mm thick insulation	70	m		
\-7					
5	Providing, Fixing, testing and commissioning of Variable refrigerant flow				
	distribution REFNUTS with insulation in the suction & Liquid lines for the	20	ooob		
	above sizes of copper refrigerant piping etc.as required.	30	each		
6	Supply of the remote for the Split and casettes	34	each		
7	Supply & Installation of following size rigid PVC pipe with accessories for				
	drain connections duly insulated with 6mm thick tubular insulation of closed cell elastometric nitrile rubber with density not less than 80Kg / cu.m i/c				
	providing hanging/clamping arrangements etc. as required.				
(a)	25 mm dia (10 kg/sq.cm, ISI marked)	150	m		
	100 11 (40) 4 10	B0			
(b)	32mm dia. (10kg/sq.cm, ISI marked)	RO	m		
(c)	40mm dia. (10kg/sq.cm, ISI marked)	RO	m		
(d)	50 mm dia. (6 kg/sq.cm, ISI marked)	RO	m		
8	Providing & Fixing Control cum Communication wiring with 2 core x 1.5				
5	sqmm PVC insulated Copper conductor Shielded Cable, 650V Grade in				
	suitable size PVC Conduit on surface / in recess i/c cutting the wall where				
	ever required & making good the same etc., as reqd. (for wiring between				
	Indoor & Outdoor Units and for remote control Units). with required accessories, CU lugs	300	RMT		
	accessories, co lugs	300	IXIVII		
9	Supply and laying of the 4cx16 sqmm Cu cable	30	RMT		
10	Supply and installation of the double compression glands for the cables				
10	6sqmm	8	EACH		
		-			
11	Supply and laying of the 10 SWG earthing wire from the MCB to Equipment				
		60	RMT		
12	Supply and installtion of the 4pole 40A 3 phase MCB near the unit	4	Each		
14	ווום מוווו וווים וווים באים ביים ליים אים אים אים ביים אים ביים ווים וווים וווים וווים וווים וווים וווים וווים	-	Lacii		
	Sub Total				
	GST EXTRA				