

Bill of Quantity of HVAC works for SBI Local Head Office at 4th Floor, Block D, 11 Parliament Street, New Delhi - 110001.					
S.No	Description	Units	Qty.	Rate	Amount
A	VRV AC Machine Details				
1.0	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating , having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 10 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R 410 A Refrigerant, vibration isolators, with suitable foundation etc.complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 52°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. Rates to be quoted with outdoor unit stand as per OEM and civil foundation work. Make: Daikin, Mithsubisi Heavy Duty, Toshiba, O General.				
1.1	20 HP	Nos.	2.00		0.00
1.2	10 HP	Nos.	2.00		0.00
2.0	Supply, Installation, Testing and commissioning of Ceiling mounted Ductable Indoor Unit (DX TYPE COIL) horizontal Ductable units . motor of efficiency class IE-3 suitable for 230 ± 10% V, 50Hz, 1 Phase AC supply suitably designed for varialbe speed applications, drain connections, MS drain pan with insulation, wherever required, necessary vibration isolation arrangement etc. Sound level at 1 m distance not exceeding 49 dB(A) complete as per specification and of following capacities. Make: Daikin, Mithsubisi Heavy Duty, Toshiba, O General.				
2.1	HSP Ductable 8.0 Tr	Nos.	5.00		0.00
3.0	Ceiling Mounted Ductable Type:Treated fresh air units				
	Supply, installation, Testing & Commissioning of Ceiling Mounted Duct Type Indoor units equipped with pre-filter, fan section with low noise fan, multispeed motor, coil section with DX coil, electronic expansion valve, outer cabinet, drain pan with drain pump kit, insulation, pipe connections complete with blower section with blower suitable for static pressure as required, cooling coil section with aluminium finned copper tubes (tubes thickness not less than 0.4mm) cooling coil of 8 row deep, filter section with 50mm thick metal viscous/ washable synthetic type air prefilters efficiency 90% down to 10 micron (MERV 8) & Fine filter (Bag filters) efficiency 99% down to 3 micron (MERV 13), belt drive package with TEFC drive motor suitable for 415 ± 10% volts, 50Hz, 3 Phase AC supply, drain connections, stainless steel (18G) drain pan with insulation, necessary vibration isolation arrangement etc. complete as required of following capacities .Make: Daikin, Mithsubisi Heavy Duty, Toshiba, O General.				
	The units shall be suitable for 230V±6%, 50 Hz. supply & complete with electrical controls & panels.				
3.1	IDU - (for TFA of fresh air supply) 8 TR	No.	1.00		0.00
4.0	Supplying, laying/ fixing, testing and commissioning of Corded Remote	Nos.	5.00		0.00
5.0	Supplying, laying/ fixing, testing and commissioning of Refnet Joints	Nos.	2.00		0.00
5.1	Supplying, laying/ fixing, testing and commissioning of Refnet ODU joints for VRF ODUs	Nos.	2.00		0.00
6.0	Beam to beam RCC foundation with stand as per OEM for VRF ODUs	Nos	4.00		0.00
7.0	REFRIGERANT PIPING				

	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of inter connecting refrigerant piping duly insulated with closed cell polyethylene foam insulation of 30 (+/-3) kg/m ³ density and fire rated Class 1 as per BS 476 Part 7. All the refrigerant pipe in outside exposed area shall be covered with cable Tray. Method shall strictly followed according to supplier's specification etc. All piping inside the room shall be properly supported with MS hanger/tie rod.				
8.1	41.2 mm O.D (Insulation: 19 mm)	Rmt	50.00		0.00
8.2	34.9 mm O.D (Insulation: 19 mm)	Rmt	26.00		0.00
8.3	28.6 mm O.D (insulation : 19 mm)	Rmt	48.00		0.00
8.4	22.2 mm O.D (insulation : 19 mm)	Rmt	62.00		0.00
8.5	19.1 mm O.D (insulation : 19 mm)	Rmt	80.00		0.00
8.6	15.9 mm O.D (insulation : 13 mm)	Rmt	17.00		0.00
8.7	12.7 mm O.D (insulation : 13 mm)	Rmt	165.00		0.00
8.8	9.5 mm O.D (insulation : 13 mm)	Rmt	12.00		0.00
	Note- Refrigerant pipe quantity may vary as per site condition.				
9.0	Supplying, laying/ fixing, testing and commissioning of communication cable (1.5 sqmm X 2 Core)	Rmt	300.00		0.00
10.0	Supply, installation, testing and commissioning of PVC Pipe, complete with fittings, supports,U trap arrangement,Clean Plug and accessories for AHU/IDU as per specifications, drawings.				
10.1	32 mm dia (with 6mm Nitrile)	Rmt	65.00		0.00
10.2	40 mm dia (with 6mm Nitrile)	Rmt	35.00		0.00
11.0	CABLE TRAY FOR REFRIGERANT PIPING				
	Supplying and installing of following size of hot dip galvanized G.I cable tray with cover, in convenient sections, joined with connectors, suspended from ceiling with G.I suspenders including bolts and nuts, etc. for carrying refrigerant pipe in outdoor application as required.				
11.1	300 mm width x 50 mm depth x 1.6 mm thickness	Rmt	150.00		0.00
12.0	GSS DUCT (Site/Factory Fabricated Duct)				
	Supply, fabrication, installation, testing and commissioning of G.S.S. sheet metal ducting for supply & return air with all the accessories and hanging arrangement.It shall include bends,elbow, tees, splitter,fittings,gaskets and all accessories for complete installation of ducting.Refer tender specification for detail description				
12.1	24 G	Sqmt	245.00		0.00
12.2	22 G	Sqmt	50.00		0.00
13.0	Supply, installation, testing & commissioning of thermal insulated flexible duct of following sizes duly supported at regular interval as per site requirement etc. complete as required as per specifications.				
13.1	200 mm dia.	Rmt	5.00		0.00
14.0	Diffusers				
	Supply , installation , testing and commissioning of Powder coated Aluminium extruded Diffuser as per specification & the sizes will be as per drawings and schedules :				
14.1	Supply Air Diffuser with Damper	Sqmt	4.00		0.00
14.2	Return Air Diffuser without Damper	Sqmt	4.00		0.00
15.0	SUPPLY/RETURN GRILLS				
	Supplying , installation, testing ,balancing & fixing of powder coated extruded aluminium Grills of various sizes and as per specifications and approved drawings and schedules.				
15.1	Supply Air Grills with Collar Damper	Sqmt	20.00		0.00
15.2	Return Air Grills	Sqmt	20.00		0.00
16.0	DUCT INSULATION				
	Supply,Installation,Testing and commissioning of Thermal insulation material for Duct insulation. The quoted price shall include adhesive and accessories required to fix the insulation on the duct.				
16.1	13mm on supply/Return duct	Sqmt	240.00		0.00

17.0	DUCT ACOUSTIC LINING				
	Supply and installation of acoustic insulation for ducts with open cell polyolefin foam. Density of the material shall be 40-60 Kg/m ³ . Quoted price shall be inclusive of adhesive, tapes as per specification. Refer tender specification for detail description				
17.1	10 mm thick	Sqmt	120.00		0.00
18.0	Wall / Floor Chasing	Mtr	3.00		0.00
19.0	DOUBLE LAYER CANVAS CONNECTION				
	Supply, installation, testing and commissioning of double Layer canvas connection for Ductable Unit/Air handling unit and Ventilation fan to reduce the vibration.	Nos	5.00		0.00
20.0	Supply Installation of Ductable Drain Pump	Nos	5.00		0.00
21.0	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications.	Sqm	7		0.00
22.0	Supply, installation, testing & commissioning of Thermal insulated flexible duct of following sizes duly supported at regular interval as per site requirement etc. complete as required as per specifications.				
22.1	150 MM Dia	Rmt	65.00		0.00
23.0	Supply, installation, testing & commissioning of SPIGOT DAMPER of 150MM DIA sizes duly supported at regular interval as per site requirement etc. complete as required as per specifications.	Nos	15.00		0.00
24.0	Air Purification				
	SITC OF CAPS (central air purification system) electronic class filtration system for improving the complete indoor air quality with a very low-pressure drop that integrates with the building air delivery system The unit shall be designed to reduce at least 95% of the airborne particles down to 0.1 micron with low pressure drop of less than 020" wg at 25 m/s Ozone generation shall be NIL with no components working on the corona discharging principle for polarization Unit should be capable of reducing PM 10 PM 25 PM 10 Bacteria Virus VOCs Odor etc and should meet all the other requirements mentioned in the tender specs (it should be ISO16890 and it should have MERV 15 ratings as per ASHRAE 52.2 standards.) Make:- Intelligreen/Air Ultra/ A K Enterprises	Nos	5.00		0.00
	Total Amount for HVAC works (excl. GST)				0.00