

**AIR CONDITIONING WORKS WITH BACKUP AT 1st FLOOR MD & 2nd FLOOR CHAIRMAN CAMP OFFICE
OFFICE ANNEX BUILDING SBI LHO**

Sr. no	Particulars	Qty	Unit	Rate	Amount
	Supply of Out Door/Indoors energy efficient Units suitable for VRF / VRV System DAIKIN / MITSUBISHI / HITACHI/Bluestar/Carrier/Voltas/LG with anti corrosive coating (OEM/Manufaturer certificate to be attached)				
1	Supply of Modulating outdoor units, with multi/single scroll compressors (minimum one/two compressors) with inverter type compressor, special pre-coated fins, panel,corrosion resistant (suitable for seaside installation) coated condenser, inverter-based condenser fan M.S.hot dip galvanized stands / supports, electrical & microprocessor panel, isolating valves and all the necessary accessories for proper functioning of the units, having following approximate capacities. Outdoor units suitable for following capacities				
	Note: Fins and copper tubes of Air Cooled Condenser along with copper tubing / piping with all joints and U- Bends exposed to coastal areas corrosive atmosphere / aggressive ambient, shall be painted with special corrosion prevention coating either in factory or at site				
a	20 HP VRF ODU	6	No		
	Supply of VRF based Indoor units complete with remote and all accessories, Vibration isolators & supports. The indoor unit shall be suitable for a power supply of 240V/ 1 phase/ 50Hz OR 415V / 3				
2	High Static Ductable Type Indoor Units, unit shall be complete with remote controller				
a	8.0TR Ductable Unit	2	nos		
b	6.0TR Ductable Unit	8	nos		
c	4.5 TR Ductable Unit MD PASSAGE RECEPTION	2	nos		
3	4Way Cassette Type Indoor Units, unit shall be complete with remote controller				
a	4TR Cassette Unit	1	nos		
b	2.5TR Cassette Unit	1	nos		
c	2.0TR Cassette Unit	4	nos		
d	1.5TR Cassette Unit	2	nos		
4	Hi wall Type Indoor Units, unit shall be complete with remote controller				
a	2.0TR Hi wall Unit	2	nos		
b	1.5TR Hi wall Unit	2	nos		
c	1.0 TR Hi wall Unit	4	nos		
5	Y Joints	30	nos		

6	SUPPLYING OF following ductable/CASSETTE / SPLIT (Five Star)(single/three phase) AIR CONDITIONERS- AIR-COOLED TYPE having ODU & Single circuits with Scroll /rotary Compressors including indoor unit with fan, fan-motor, Copper cooling coil, expansion device, condensing unit, compressors, cond. coils, cond. Fans, safety cutouts, inbuilt control panel and 1st time fill refrigeration complete with contactors, relays, internal cabling, thermostat to control temperature & machine, having single Indoor unit & single Outdoor unit with display facility and wireless remote control.				
a	8.0 Tr. HI Static Inverter Ductable AC unit shall be complete	3	Nos		
b	5.5 Tr. HI Static Inverter Ductable Type AC Units, unit shall be complete	2	Nos		
c	4.0 Tr. Cassette inverter AIR CONDITIONER (Five star and above)	6	No		
d	3.0 Tr. Cassette inverter AIR CONDITIONER (Five star and above)	1	No		
e	2.0 Tr. Compact Cassette inverter AIR CONDITIONER (Five and above)	3	Nos		
f	1.5 TR High Wall INVERTER SPLIT AIR CONDITIONER(Five star and above)	3	nos		
g	2.0 TR High Wall INVERTER SPLIT AIR CONDITIONER (Five star and above)	1	nos		
	SECTION 'A' EQUIPMENT TOTAL				
	SECTION LOW SIDE				
B	Installation of VRF/ VRV system				
1	Installation, Testing and Commissioning of Out Door Units suitable for VRF / VRV System & -Price shall inclusive of Refrigerant charge, LIFTING SHIFTING OF ALL VRF UNITS, and other necessary accessories Pressure Testing, Nitrogen flushing, gas charging (R410A), testing & commissioning of the air-conditioning system				
a	20 HP VRF ODU	6	nos		
2	Removing of existing ac and Installation, Testing and Commissioning of Indoor Units suitable for VRF / VRV System. Costs shall include hanging / mounting arrangements for the respective IDUs and shall also include for wall mounting of remote controllers near respective units and LIFTING SHIFTING, ERECTION & Nitrogen Pressure Testing Of Existing Copper Pipe And All Indoor Unit As Per Specification Of OEM				
a	8.0TR Ductable Unit	2	nos		
b	6.0TR Ductable Unit /4.5 TR Ductable Unit	10	nos		
c	4.0TR/ 2.0 TR/1.5TR Cassette Unit	8	nos		
d	2.0TR/ 1.5 TR/1.0TR Hi wall Unit	8	nos		
3	REFRIGERANT PIPING FOR VRF				

	Supply, installation, testing & commissioning of the insulated refrigerant piping for all the units as per specifications with insulation of thick Nitrile rubber throughout the running length of the refrigerant piping with supporting arrangements				
a	Copper Ref.Hard / soft pair Ref piping pair (liquid+suction) of the required sizes for ductable/VRF units with refnets as per specs. The insulation shall be of 19mm thick Armaflex make through out the running length of Ref. piping. The piping shall be well supported at specific intervals with GI supports with insulated PUF saddles and installed on GI cable trays supported from wall / roof with anchor fasteners & C type ms angle..	480	mtrs		
b	COPER REFRIGERANT PIPING (liquid+suction) 20 SWG / 22 SWG of the required sizes for all the CASSETTE units with the insulation shall be of 19mm/13mm thick Armaflex make through out the running length of Ref. piping (Hot+cold side). The piping shall be well supported at specific intervals with GI supports with insulated PUF saddles and installed on supported from wall / roof with anchor fasteners & angle.	180	mtrs		
c	Supply & installation for additional Hilton insulated hard/soft copper refrigerant piping (liquid+suction) for split airconditioning complete with fittings, elbows, bends, supporting arrangement on walls, cable trays. (separate for each unit) Hot side + cold side piping will be measured as one length existing copper Refringent piping for 1.5/1.0TR Hi wall type unit will be measured beyond 3mtrs of each unit.	60	mtrs		
4	Drain water piping work out of PVC hard pipes covered with Hilton insulations, complete with fittings, bends, elbows, tees flanges, tappings, wall sleeves, hangers, supports, anchors, Drain Piping shall be insulated with 9mm Nitrill Rubber Insulation Armaflex/kflex 32mm Dia	270	mtrs		
5	Drain water piping work for HIGH WALL AC of 32 mm PVC/HDPE hard pipes covered with Hitlon insulations, complete with fittings, bends, elbows, tees flanges, tappings, wall sleeves, hangers, supports, anchors	50	Mtr		
6	Drain water piping work for HIGH WALL AC of 20 mm PVC/HDPE hard pipes covered with Hitlon insulations, complete with fittings, bends, elbows, tees flanges, tappings, wall sleeves, hangers, supports, anchors	50	Mtr		
7	CABLE TRAY				
	Supply and Erecting Perforated type Hot dip G.I. cable tray of 18G. Cable tray using for exposed copper piping	50	Rmt		
	300mm With Cover Cable Tray				
8	CONTROL CABLING FOR VRF				
a	Supply, installation, testing & commissioning of the control cabling from indoor to outdoor unit .& from indoor to outdoors unit and from outdoor to central controller 2cX1.5 sq. mm. shielded communication copper cable(Polycab/RR/Havells)	850	mtrs		

9	CONTROL CABLING FOR SPLIT AC UNIT				
	Supply, installation, testing & commissioning of Power & control cabling required from indoor unit to outdoor unit. Power supply will be made available near the indoor unit only. Power & control cabling for 1.5TR highwall type unit(3cX1.5 sq. mm.) (Polycab/RR/Havells)	70	Mtr		
10	CONDENSING UNIT STANDS SHOULD BE C CHENNAL-100 X40 FOR 22HP/ 20HP VRF	6	Nos		
11	REFREGERENT 410 GAS FOR VRF	100	KG		
12	Necessary civil work : Trenching work / Making & remaking of holes in walls, final finishing the same in all respects pop,cements,etc with labour charge for same including loading and unloading. Charges, cutting of pop sheet and trenching work if required etc.	1	Lot		
13	Anti Corrosion Paint For Copper Piping condensing units out door header and the pipes which may effect due to sulpher atmosphere With Adequate No. Of Coats To Give Uniform Finish With Paint and covered by 7 mill cloth and adhesive.	1	Lot		
14	SHEET METAL WORK				
a	22guage Ducting With Nitrille Rubber Insulation for accoustic @10 mm thick open cel density not less 140 kg.m3 . Duct modification will as per site requirement for making the stand by ac of same capacity in same plenum with the provision of gravity control damper.	12	Nos		
b	Canvass Connection	17	Nos		
15	Installation, Testing and Commissioning of AC's -Price shall inclusive of Pressure testing, with all require anchor fastner accesories & LIFTING SHIFTING OF ALL UNITS, and other necessary accessories, leak testing Nitrogen flushing, testing & commissioning of the air-conditioning system as per requirement.				
i	8.0/6.0 Tr. HI Static Inverter Ductable Type AC Unit	10	nos		
ii	4.0/3.0/2.0 Tr. Cassette inverter AC	10	nos		
iii	2.0TR/1.5 TR Inverter Split AC	4	nos.		
16	M. S. Epoxy Painted Stand for Ductable Outdoor Unit complete fabricated with C - Channel / MS Angle etc.	5	Nos		
17	M. S. Epoxy Painted Stand for Cassette Outdoor Unit complete fabricated with C - Channel / MS Angle etc. with table top type (set of two one above another). As per the Engineer instruction.	5	job		
18	M. S. Epoxy Painted Stand for Split Outdoor Unit complete fabricated with C - Channel / MS Angle etc. with s(set of two one above another). As per the Engineer instruction.	2	job		
19	Core Cuttings & filling the same with cement and access	3	Nos		

20	Supply, Fabrication, Installation, Testing & Commissioning of following gauges of Galvanized Iron (GI) Sheet complete with splitters, supports, dampers, and turning vanes. (Approved Makes: Jindal, SAIL, TATA, Equivalent).				
i	22 G 0.8 mm thk Ducting	150	Sqmt		
21	Duct Acoustic Insulation shall be 13 mm thick Microban type Closed cell type rubber insulation with 140-180 Kg/m3 density. thermal conductivity not exceeding 0.047 W/m.K @ 20 Deg. C Apply approved adhesive and fastners as per specification	160	Sq.mt.		
22	SITC of Square supply air Diffuser (Approved Makes: Dynacraft; Cosmos; Air Products, System Air,)	2	Nos		
23	SITC of Square Return air Diffuser (Approved Makes: Dynacraft; Cosmos; Air Products, System Air)	2	Nos		
24	Supply and Installation of Duct Volume control Dampers, constructed out of 20 G GI sheet. (Approved Makes: Dynacraft; Cosmos; Air Products, System Air)	20	Sq.mt.		
25	Drain pump for Split Ac Throw capacity 600mm and above (Approved Makes :- Aspen, V Gard, Value , SICCOM , Wipcool)	2	No		
	SECTION 'B' TOTAL				
ANNEXURE					
	GRAND TOTAL OF HIGH SIDE				
	GRAND TOTAL OF LOW SIDE-B				
III	GRAND TOTAL (Excluding GST)				
1	Less Dismantiling & Buy Back of existing VRF Indoor & outdoor unit With All Accessories			(-)	
V	GRAND TOTAL (AFTER BUYBACK)				
1	Comprehensive Annual Maintenance Contract For the above air-conditioning system at Annex Building, BKC, LHO Mumbai after defect liability period of one year. The capacity of the AC system is (120HP +66 TR) including all parts				
a	1st Year	1	Lot		
b	2nd Year	1	Lot		
c	3rd Year	1	Lot		
	GRAND TOTAL AFTER AMC				
NOTE:-	ALL QAUNTITIES ARE APPROXMIATELY QUOTED				
	BILLING & TAXES WILL BE AT ACTUAL				
	SCAFFOLDING IN CLIENT SCOPE				
	LOCAL MATADI CHARGES IN CLIENT SCOPE				