

PYRAMIDS INDUSTRIAL PARK (PIPARK) ZONE 10

Bill of Quantity

MV DISTRIBUTOR



	<p style="text-align: center;"><u>SUMMARY</u></p> <p><u>DIVISION 04 MASONRY</u></p> <p><u>DIVISION 05 METALS</u></p> <p><u>DIVISION 07 THERMAL</u> <u>& MOISTURE PROTECTION</u></p> <p><u>DIVISION 08 : OPENINGS</u></p> <p><u>DIVISION 09 : FINISHES</u></p> <p><u>DIVISION 03 - CONCRETE</u></p> <p><u>DIVISION 07 - THERMAL AND MOISTURE PROTECTION</u></p> <p><u>DIVISION 31 EARTHWORK</u></p> <p><u>DIVISION 26 - ELECTRICAL</u></p> <p><u>M.V DISTRIBUTOR ROOM (Quantity = 4)</u></p> <p><u>DIVISION 21MECHANICAL</u></p> <p><u>M.V DISTRIBUTOR ROOM (Quantity = 4)</u></p>	
	<p><u>SDM ZONE 11 INDUSTRIAL PARK</u></p> <p>To Summary</p>	

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 04 MASONRY</u> <u>04 20 00 Unit Masonry</u> <u>04 21 13 Brick Masonry</u> <u>Supply and install External solid blocks , rate includes solid blocks around openings and for first course , mortar, filler and all other accessories for work completion according to drawings, specifications and architect instructions.</u>				
A1	250mm solid block	85.00	m ³		
A2	120mm solid block	10.00	m ²		
	<u>04 MASONRY</u> To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 05 METALS</u> <u>METAL FABRICATIONS</u> <u>External and internal steel ladder case from ground floor to roof composed of two vertical steel pipes horizontal steel pipes , with anti-rust painting,</u> <u>.Rate includes, fixing, and all requirements as approved shop drawings (by consultant), specifications and architect's instructions.</u>				
A1	external Stainless Steel ladder case, with save cage refers to detailed drawings as approved sample	1.00	no.		
A2	internal Stainless Steel ladder case, refers to detailed drawings as approved sample	1.00	no.		
	<u>04 MASONRY</u> To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 07 THERMAL & MOISTURE PROTECTION</u> <u>07 12 00 Built-Up Bituminous Waterproofing</u> Repair all surfaces as required to provide a suitable surface clean, dry, smooth for the waterproofing membrane One layer 4 mm thick ,non-woven polyester membrane sheet reinforced by fiberglass, rate include the protection filter or screed layer as per drawing, specification and A For Roof , as approved 160.00 m ² B for Toilet , as approved 5.00 m ² <u>THERMAL INSULATION</u> <u>07 21 0 BUILDING INSULATION</u> 50 mm heat Insulation layer for roofs of extruded polystyrene boards from advefoam or awazel as shown on drawings and specifications, including the overlap section between the sheets with a density of at least 35 kg/m3. C for roof 150.00 m2				
	<u>07 Thermal & moisture protection</u> To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 08 : OPENINGS</u> <u>for All the opening</u> <u>The price include the frame and sub-frames.</u> <u>08 13 16 ALUMINUM DOORS AND FRAMES</u> <u>Deliver and install aluminum door , all according to drawings and specifications electrostatically powder coated capable of withstanding windloads ,seismic events and price includes fixation. Internal accessoreis to be original Handles and locks by SAVIO Italy</u> a D01: 2800X3000mm, aluminum electrostatically painted door with 2 double leaf hinged panals as per drawing and approved sample <u>08 14 00 WOOD DOORS</u> <u>6mm MDF oak veneered cladding Wooden door fixed on soft wood frame, frame and architrave will be wood with the same door finish,rate includes lipping, ironmongery, louvers, glass(if any)and all needed accessories, paints and fixing all according to drawings ,specifications and architect instructions..</u> b D02: 1000X2200mm, single leaf wooden door , as per drawing and approved sample c D03: 900X2200mm, single leaf wooden door , as per drawing and approved sample	2.00	NO.		
		1.00	NO.		
		1.00	NO.		

Item	Description	Qty	Unit	Rate	Amount
	<u>085000 WINDOWS</u> <u>085113ALUMINUM WINDOWS</u> <u>Deliver and install aluminum windows using</u> <u>Alunil, shoko, hartmann profiles or else approved</u> <u>. 6mm single wired glass by saint-gobain or else</u> <u>approved , all according to drawings and</u> <u>specifications electrostatically powder coated</u> <u>capable of withstanding windloads ,seismic</u> <u>events and price includes fixation. Internal</u> <u>accessoreis to be original Handles and locks</u>				
d	W01 : 2000X600mm- powder coated aluminum louvers as per drawing and approved sample	1.00	NO.		
e	W02 : 800X700mm - hinged window with single tinted layer glass, as per drawing and approved sample	1.00	NO.		
	<u>Divisions 08 : Openings</u> To Summary				

	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 09 : FINISHES</u> <u>EXTERNAL FINISHES</u> <u>092000 PLASTER</u> <u>Cement plaster, Cement and sand (1:4) rendering plaster to external walls, . Rate includes scratch coat and all related accessories, all according to drawings,specifications and architect instructions</u> For External walls 305.00 m ² <u>099000 PAINTING AND COATING</u> <u>099123 EXTERNAL PAINTING</u> <u>Acrylic base emulsion paint one plaster primer coat and two coats (Jotun, Savito or drymix or equivalent) to concrete ,masonry, render and plaster. Rate includes all Preparations works, all according to drawings ,specifications and architect instruction.</u> 01: plaster paint for External walls as approved colour. 305.00 m ² <u>096600 TERRAZZO TILES</u> <u>Supply & installation of the following approved Terazzo tiles using 20mm thk x 200mm x 200mm as per Architects approval; laid on cement bed including grouting joints, cutting, polishing and adhesive complete as specified. Refer to (screed levelling measured separately)</u> Roof Deck Terrazzo Floor Tiles,, as approved sample. 150 m ² <u>SKIRTING</u> <u>Rate includes first grade materials, accessories, 45 degrees or round chamfer, mortar and joint sealants. All according to drawings, specifications and architect's instructions.</u>				

	Description	Qty	Unit	Rate	Amount
	Terrazzo Skirting H = 100 mm. as approved sample.	60	m		
	<u>INTERNAL FINISHES</u> <u>092000 PLASTER</u> <u>Cement plaster, Cement and sand (1:4)</u> <u>rendering plaster to internal walls, . Rate</u> <u>includes scratch coat and all related</u> <u>accessories, all according to</u> <u>drawings,specifications and architect</u> <u>instructions</u> For Internal walls . For internal Ceiling .	525 290	m ² m ²		
	<u>INTERNAL FINISHES</u> <u>FLOORING FINISHES</u> <u>093000 TILING</u> <u>093013 CERAMIC TILES</u> <u>Supply and install Ceramic Tiles</u> <u>approved,Rate includes first grade materials</u> <u>, mortar , sand bed , grouting, pointing and</u> <u>expansion joint, all according to drawings</u> <u>,specifications and architect instructions.</u> F02: anti slip Ceramic Tiles , as approved sample	10	m ²		
	<u>SPECIAL COATINGS</u> <u>Special coating to Fair face concrete screed</u> <u>areas to have a smooth texture, dust free</u> <u>surface complete with all needed mortars,</u> <u>grounding etc, to have a final smooth dust</u> <u>free surface from an approved material ,</u> <u>manufacturers and specs from passive, jotun</u> <u>or else approved.</u> F01: Epoxy Coating flooring (one primer coat + Surface Filler + two finishing coats)	280	m ²		

	Description	Qty	Unit	Rate	Amount
	<p><u>099000 PAINTING AND COATING</u> <u>099123 INTERIOR PAINTING</u></p> <p><u>Acrylic base emulsion paint to plasterboard ,the painting coats consisting of -at least - 6 coats (one primer coat (fenomastic primer) + 2 putty coats (stucco) + one primer coat (fenomastic primer) +2 finishing coats) to render and plaster & (acrylic solvent base (penetrating sealer) + 2 finish coats) for Dry walls (use putty for filling dray walls joints , anchors , etc...) Jotun , GMC, SIPES or equivelant as approved (all painting phases from the same manufacturer). Rate includes all Preparations works, all according to drawings ,specifications and architect instructions.</u></p> <p>Fenomastic silk paint to plastered walls internally W01: light /dark / grey or beige acrylic paint , for internal area as approved sample. C01 : acrylic paint on plaster . as approved sample</p>				
		525	m ²		
		290	m ²		
	Divisions 08 : Openings To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 03 - CONCRETE</u>				
	<u>033000 - CAST IN PLACE CONCRETE</u>				
	<u>cast-in-place concrete with 12Mpa(120kg/cm2) compressive strength (28 days); including all necessary formwork and complying with specifications; plain</u>				
A	Under Strip footings, ground beams, machine bases, beds, pits and the like	100	m ²		
	<u>cast-in-place concrete with 30Mpa(300kg/cm2) compressive strength (28 days);including all necessary formwork and complying with specifications; not including reinforced</u>				
B	Strip Foundations for walls;	31	m ³		
C	Ground Beams;	5	m ³		
D	Columns;	12	m ³		
E	Walls;	42	m ³		
F	Slabs;	40	m ³		
G	Drop Beams, Upstands and parapets;	35	m ³		
	<u>cast-in-place with 25Mpa(250kg/cm2) compressive strength (28 days); including all necessary formwork and complying with specifications; light</u>				
H	<u>Slab on grade/slab on compacted fill, For parking area (150mm Thickness +50mm Blinding Concrete) with one layer of reinforcement (Ø10@200) with joints (construction, expantion, and control) & Two layers from Polythene sheet membrane (500-micron and each layer 0.50 mm thick.).</u>	148	m ²		

Item	Description	Qty	Unit	Rate	Amount
	<u>Bar reinforcement</u>				
I	High yield steel; 400Mpa specified yield strength .For columns,	1.75	T		
J	High yield steel; 400Mpa specified yield strength .For Walls,	6	T		
K	High yield steel; 400Mpa specified yield strength .For Isolated, Strip Foundation, Ground beams,	3.50	T		
L	High yield steel; 400Mpa specified yield strength .For slabs, drop beams, Upstands and parapets;	7	T		
	<u>DIVISION 03 - CONCRETE</u>				
	To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 07 - THERMAL AND MOISTURE PROTECTION</u>				
	<u>071113 - BITUMINOUS DAMP-PROOFING</u>				
	<u>Bituminous damp-proofing coating, Cold applied to reinforced 'concrete surfaces in direct contact with soil for the following:</u>				
A	Foundations (sides & top), column, walls , ground beams, edges of beds, thickenings of beds, machine bases, channels, pits and the like.....	235	m ²		
	<u>071355 - APP-MODIFIED BITUMINOUS SHEET WATER PROOFING</u>				
	<u>Waterproofing sheet 4mm thick., applied to reinforced concrete surfaces 'in direct contact with soil complete with all accessories and fixings and as per the manufacturer recommendations; including a protection board (cartonal 3 mm) for the following:</u>				
B	Walls, pits and the like.....	270	m ²		
C	Roof;	160	m ²		
	<u>07 - THERMAL AND MOISTURE PROTECTION</u>				
	To Summary				

Item	Description	Qty	Unit	Rate	Amount
A	<u>DIVISION 31 EARTHWORK</u>				
	<u>311000 - SITE CLEARING</u>				
	<u>Site Preparation</u>				
	Clearing the site generally	1	Item		
	<u>312000 - EARTHMOVING</u>				
	<u>Excavating</u>				
	Basements, Pits, trenches, footings, ground beams, etc.	775	m ³		
	<u>Soil fill and engineered Fill</u>				
C	Fill material from outside	500	m ³		
D	Fill material from Excavation output Optional item	1	m ³		
	<u>31 EARTHWORK</u> To Summary				

Item	Description	Qty	Unit	Rate	Amount
	<u>DIVISION 26 - ELECTRICAL</u>				
	<u>M.V DISTRIBUTOR ROOM (Quantity = 4)</u>				
	26 51 00--INTERIOR LIGHTING.				
	Supply, Install, tet & hand-over in compliance with the tender specifications & drawings :-				
	Light Fixture F3				
A-1	Surface Mounted Luminaire Flurocent Lamp (42W)or Led Lamp	76	Nr		
	Light Fixture F3E				
A-2	Surface Mounted Luminaire Flurocent Lamp (42W)or Led Lamp With Battery Back UP	52	Nr		
	26 27 26-WIRING DEVICES				
	Supply, Install, tet & hand-over in compliance with the tender specifications & drawings :-				
B	LIGHT SWITCHES				
B-1	One gang,One Way 10A modular Switch	16	Nr		
B-2	One gang,One Way 10A modular Switch , Water Proof	4	Nr		
C	SOCKET OUTLETS				
C-1	16A wall Single socket outlet IP=20	64	Nr		
C-2	16A wall Single socket outlet IP=54 , Water Proof	4	Nr		
	26 2816 - ENCLOSED SWITCHES & CIRCUIT BREAKERS				
	Supply, Install, tet & hand-over in compliance with the tender specifications & drawings :-				
D	SWITCH FUSE POWER OUTLET				
D-1	16A Switch Fuse with two pole. (Ex-Fan)	32	Nr		
	26 05 19-LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES				
	Supply, Install, tet & hand-over in compliance with the tender specifications & drawings :-				
E	BRANCH CIRCUITS				
E-1	3x2.5mm ² Lighting outlet	128	Nr		
E-2	3x2.5mm ² Ex-Fan outlet	1	Nr		
E-3	3x4mm ² Power outlet	68	Nr		
E-4	3x4mm ² Ex-Fan	32	Nr		
E-5	3x4mm ² Rack outlet	8	Nr		
F	(26 24 16)- (26 24 19) PANELBOARDS				
	Supply, Install, tet & hand-over in compliance with the tender specifications & drawings :-				
F-1	DB-SWG	4	Nr		
F-2	DC Panel	4	Nr		

Item	Description	Qty	Unit	Rate	Amount
I	28 31 00-ADDRESSABLE FIRE ALARM SYSTEM				
	Supply install, connect and test of fire alarm control system complete including conduits, conduit fittings, cabling, complete with all necessary accessories and ancillary works as shown on drawings and as specified in the technical specification in order to provide a complete system up to the main fire alarm control panel (MFACP). The item shall be complete with PC computer with LCD 22 inch monitor , printer & autodialler.				
I-1	Supply, install, connect and test of listed main fire alarm control panel (3loops) complete including conduits, conduit fittings, boxes, wiring up to fire alarm detectors, fixing and all necessary accessories and ancillary works as specified and as shown on the drawings.	4	No		
I-2	Supply, install, connect and test of addressable fire alarm siren.	8	No		
I-3	Supply, install, connect and test of addressable break glass manual station.	8	No		
I-4	Supply, install, connect and test of addressable smoke detector.	32	No		
I-5	Supply, install, connect and test of addressable control modules.	1	LS		
I-6	Supply, install, connect and test of addressable monitor modules.	1	LS		
I-7	Supply, install, connect and test of fire alarm circuits serving the shown detectors complete with duct banks, raceways & raceways supports. The works may include excavation in different soils & backfilling complete with inspection manholes.	1	LS		
J	[271000,27 18 00, 277 45 0] IP COMMUNICATION SYSTEM				
	Supply, install, connect and test Telecom / Data system complete including wiring devices, conduits, conduit fittings, Cat 6 cabling between the outlets to the respective access switches,, earthing complete including plaster rings, wiring, earthing terminations, socket plate, cover, plugs, and all necessary accessories and ancillary works for a complete system.				
J-1	Telecom wall mounted IP-outlet	16	No		
J-2	Supply install, connect and test of main IT distribution rack complete with patch panels, power strips , rack mounted UPS as specified and indicated in the drawings with all necessary termination, conduits, raceways, patch cords, cables and all necessary accessories required to complete operative system.	4	No		

Item	Description	Qty	Unit	Rate	Amount
K	26 05 26 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS				
K-1	EARTHING (GROUNDING) SYSTEM Furnishing, supplying, installing and testing a complete protective earthing (PE) system complete with earthing pits, earthing electrodes, equalizer bars, earth continuity conductor, and earthing conductor to switchboards, diesel generator set and transformers complete with all accessories, fixing brackets, test links, complete with all accessories, fixing brackets, test links suspensions, drilling and cutting for complete installation all in accordance with technical specifications and drawings	1	LS		
K-2	LIGHT CURRENT SYSTEM EARTHING (GROUNDING) SYSTEM Furnishing, supplying, installing and testing a complete protective earthing (PE) system complete with earthing pits, earthing electrodes, equalizer bars, earth continuity conductor, and earthing conductor to switchboards, diesel generator set and transformers complete with all accessories, fixing brackets, test links, complete with all accessories, fixing brackets, test links suspensions, drilling and cutting for complete installation all in accordance with technical specifications and drawings NB Earthing impedance must be ≤ 0.5 ohm	1	LS		
	DIVISION 26 - ELECTRICAL To Summary				

Item	Description	Qty	Unit	Rate	Amount
A	DIVISION 21MECHANICAL M.V DISTRIBUTOR ROOM (Quantity = 4) DIVISION 21 PLUMBING SYSTEMS Contractor to include all catalogues of Plumbing system in which his prices is based upon during tendering for Engineer's evaluation. The bill toilet sanitary fixtures & plumbing fixtures items values shall include the cold & hot water piping within the respective area up to the water supply mains. The bill shown water supply piping items are related to water supply risers & mains piping. The bill toilets sanitary & plumbing fixtures items values shall include the drainage water piping within the respective area up to the drainage risers or mains. The bill shown drainage piping items are related to drainage risers & mains piping.				
	COLD & HOT WATER PIPES Supply and install polypropelene cold water piping complete with valves, fittings, accessories, hangers, supports & all necessary works to maintain complete & adequate job. Hot water pipes shall be insulated with closed cell rubber insulation. The pipes shall be surface or embedded. The pipe hangers shall be nickel chrome clevis type as per Grinnel co products specifications. The item works shall be complete with valves & accessories. The valves, fittings & piping shall be PN10 rated.				
	A-1 25mm Pipe diameter	mt	20		
	A-2 20mm Pipe diameter	mt	20		

Item	Description	Qty	Unit	Rate	Amount
B	DRAINAGE PIPES Supply, install, test & hand-over UPVC-PN6 for the drainage system complete with cleanouts, fittings, joints, excavation, backfilling, joints, adapters, brackets, supports, hangers, testing and all other accessories. The pipe hangers shall be nickel chrome clevis type as per Grinnel co products specifications. The works shall be complete as specified & shown in the tender drawings. Core openings for the below floor slab network shall be included in this item.	230			
B-1	50mm Pipe diameter	mt	20		
B-2	75mm Pipe diameter	mt	20		
B-3	110mm Pipe diameter	mt	40		
C	WATER SUPPLY EQUIPMENT Supply, install, test & hand-over domestic water supply building main valve (PN 10) Dia.25mm. The works shall include water meter, check valve, water meter manhole, all accessories and shall be complete as shown in the tender drawings. The water meter shall be digital type.	No.	4		
C-1	Supply, install, test & hand-over electric water heater. The works shall be complete as shown in the tender drawings & specifications.	No.			
C-2	30 litre storage capacity.	No.	4		
D	PLUMBING ACCESSORIES Supply, install, test, and hand over UPVC rainwater side roof drain. The unit shall be equipped with cast iron perforated cover. The unit shall be adequate to match the roof water membrane & tiling. The roof drain shall be a product of ISO 9001 listed firm. The item includes pipe connection & all necessary accessories to maintain an adequate performance.	No.			
D-1	110mm diameter		4		
D-1.2	Supply and install (F.D) floor drain of PVC body with 50mm minimum provided water seal height. The (F.D) shall be equipped with 150x150mm chrome-plated cover. The cover shall be equipped with threaded round access opening fitted with removable threaded plate. The F.D. outlet shall be				
D-2	75mm dia.	No.	4		

Item	Description	Qty	Unit	Rate	Amount
D-3	Supply and install 300x300mm with 100mm outgoing pipe diameter, PVC gully-trap. The gully-trap shall be a product of an ISO 9001 listed firm. The gully-trap shall be enclosed with 150mm brickwork enclosure. The item shall include pipe connection, termination, excavation. The work shall be complete with accessories necessary to maintain an adequate performance.	No.	4		
D-4	Supply, erect, test & hand-over:- drainage inspection chamber complete with 185 Kgm (285 Kgm if located in the roads) cast iron cover (600x600)mm & all necessary accessories. The chamber shall be constructed of 250mm thickness brick walls, plan concrete base & reinforced concrete top slab. The item shall include Excavation, backfilling & the removal of the excess soil to approved destinations outside the site. The item shall include all necessary accessories to maintain adequate completion as per specifications & tender drawings. 60X60 CM	NO.	4		
E	DIVISION(15-12) SANITARY FIXTURES				
E3	Supply, install & handover:- Sanitary fixtures including the supply of all necessary component parts, traps, flexible connections, control valves, waste connections, assemblies connecting to supply and waste system, setting, bedding, sealing and making good all as specified. Supply, install, test, and handover China Water closet (WC) with flush tank. The item shall include toilet seat, 2no chrome plated 15mm angle valves & toilet tissue holder. The WC shall be equipped with flexible perineal hose. The item shall include the necessary water supply & drainage piping complete with all other accessories according to specifications and tender drawings.	No.	4		
E4	Supply, install, test, and handover Lavatory (lav) complete with Chrome plated water mixer, chrome plated waste-overflow outlet, siphone & all necessary chrome plated angle valves. The item shall include the necessary water supply & drainage piping complete with all other accessories according to specifications and tender drawings.	No.	4		

Item	Description	Qty	Unit	Rate	Amount
F	DIVISION 22 FIRE FIGHTING SYSTEM FIRE EXTINGUISHERS Supply, install, test & hand-over fire extinguishers. The units shall be in compliance with NFPA rules & UL listed.				
F-1	FE-1 (6 kg dry powder).	NO	12		
F-2	FE-2 (5 kg CO2 powder).	NO	12		
E	DIVISION 23 HVAC FANS Supply and install fans with standard accessories as per schedules and specifications complete with earthing, steel base and frame, rubber pads, sealers for sound and leakage isolations screens and supporting, tags, labels, flow indicators and color code finishing, duct connection and flexible duct on outlet and inlet. The works shall include start up & commissioning.				
E-1	EXF-01 - Centrifugal Inline Fan - 1900 cfm	No.	4		
E-2	FAF-01 Centrifugal Inline Fan - 1900 cfm	No.	4		
E-3	EXF-02 - Wall mounted fan - 1840 cfm	No.	4		
E-4	EXF-03 - Wall mounted fan - 1100 cfm	No.	4		
E-5	EXF-04 - Wall mounted fan - 300 cfm	No.	4		
E-6	EXF-05 - Wall mounted fan - 100 cfm	No.	4		
E-7	FAF-02 - Wall mounted fan - 2040 cfm	No.	4		
E-8	FAF-01 - Wall mounted fan - 2000 cfm	No.	4		
E-9	EXF-01 - Wall mounted fan - 2000 cfm	No.	4		
E-10	FAF-01 - Wall mounted fan - 1400 cfm	No.	4		
E-11	EXF-01 - Wall mounted fan - 1400 cfm	No.	4		
G	SHEET METAL DUCTWORK Supply and install galvanized sheet metal ductwork according to the tender drawings with standard accessories such as volume dampers, fire dampers, flexible connections, splitter complete with support, hangers, rods, anchors nuts, bolts, riveting and sealers, sleeves, rubber pads for sound isolations, tags, charts, labels, color code finishing, flow indicators, testing and commissioning. The duct supports shall be manufactured of galvanized 2" angles that are hanged by 8mm galvanized threaded rods from the ceiling slab.	Kg	3840		

Item	Description	Qty	Unit	Rate	Amount
H	SECTION (000) GRILLES, REGISTERS & DIFFUSERS				
	Supply, install & handover aluminium electrostatic painted air outlets with the following description:- Diffusers shall be aluminium with steel miscellaneous components for fixed horizontal discharge pattern. These diffusers shall consist of an outer frame assembly with an integral square inlet. An inner core assembly consisting of fixed deflection louvers shall be available. The inner core assembly shall be removable without tools for easy installation, cleaning, or damper adjustment. The diffusers shall be equipped with aluminium volume damper. The damper shall be operable from the face of the diffuser by removing the spring loaded inner core. The diffusers shall be finished with an anodic acrylic paint. The supply air grills or registers shall be double deflection type movable vanes with integral volume control dampers. The exhaust or return air grills shall have single fixed vanes.				
H-1	EXAG 26"X6"	No.		44	
H-2	FAG 26"X6"	No.		44	
E-2	FAL 40"X8"	No.		4	
E-4	D.G 10"X10"	No.		8	
E-5	D.G 6"X6"	No.		4	
I	ELECTRICAL WORKS				
	Supply, install & handover all cables & wiring between HVAC equipment & others up to power points as shown on the tender drawings. This should include rigid & flexible conduits, wiring, cabling & all necessary accessories as specified & shown in the tender drawings.	LS	LS		
	MECHANICAL				
	To Summary				