

ELECTRICAL BILL OF QUANTITY SHEET

Sr. No.	QTY	Description & detail of work	Unit	Total Rate	Amount
1	1.00	<p>SITC of Capsul Passenger Lift with</p> <ul style="list-style-type: none"> □ Rated capacity :- 6 Passenger [MRL Automatic Capsule] □ Floors :- G+4 floor (5 Stops/5 Openings) □ Capacity :- Weight: 408 Kgs, Speed: 0.70 m/sec. , Rise: 12 Mtrs □ Location of Lift Machine:- MRL Automatic Capsule □ Operation & Control :- Simplex Down Collective Electronic. With V3F Drive., Signals:- Up-down direction indicators, position indicator (PI) in car and all floors, Battery operated emergency alarm bell and Voice Announcing , Shaft Size: 1800mm. wide X 1800mm. depth., Car Size:- 1000mm X 1000mm S.S. Cabin (Glass Capsule) with blower, LED spot Light., Clear entrance: 800mm , Car/Landing Doors: S.S. Center Opening Auto Glass Door / S.S. Center Opening Auto Glass Doors., Electrical Main:- 415 Volts three phase, 50 Hz AC., Auxilliary supply system:- 230 volts, single phase, 50 Hz AC., including Overhead Size 4800mm. / 1500mm. etc. complete. CAR FRAME, SAFETY AND GOVERNOR: Structural Steel Car Frame to support the car platform and enclosure shall be provided with suitable gear fixed, underneath the frame. The safety, which is actuated by a speed governor, automatically and compulsorily, brings the car to an immediate stop by clutching the car mechanically between the guide rails in case the car speed exceeds a predetermined limit in downward direction. A safety switch is provided to cut off the control circuit and apply the brake as soon as safety is actuated. 	Job		
		<p>01. SPEED GOVERNOR: The safety will be operated by a centrifugal over speed governor located usually in the hoist way or Machine room, linkage to safeties connected through a continuous steel rope with car frame. Safety switch will be provided in cage top as well as governor base as required to cut off power to the motor before application of the safeties.</p> <p>3. MACHINE: Single worm traction type located directly above the lift well, Worm gear with worm wheel of centrifugally cast bronze and worm of specially forged steel both running in bearing (bush) to ensure vibration free running with specially designed lift duty motor with low starting current and high starting torque.</p> <p>4. LIMIT SWITCH Switch act independently of operating device for cutting all the energizing current in case of car traveling beyond the top most or bottom most landing to bring the car to stop.</p> <p>5 FINAL LIMIT SWITCH: This switch automatically causes the power to be removed from elevator driving motor and brake, independent of functioning of normal terminal stopping device, operating device or any emergency terminal stopping device after the car pass a terminal landing.</p>			
		<p>6 GUIDE RAILS: Guide rails for car and counter weights will consist of machined/grounded mild steel T-section with required fixing arrangement. Counter weights will consist of structural steel frame loaded with appropriated filler weight.</p> <p>7 CONTROL PANEL: The control panel will be operated on 110 Volt D.C. with solid-state components for trouble-free & noiseless operation with maximum efficiency and longer life. This will be mounted on floor or wall with phase reversal and overload protection etc. latest high Advance Global Technology of microprocessor-based lifts Controller.</p> <p>8 DOOR LOCK: Every landing door is fitted with an electric interlock, which prevents the movement of car from landing by cutting off the supply to the control circuit, unless the gate or door is properly closed. This lock is fitted near the top of door track in such position that retiring cam lifts the electrical contact from shorting strip on beck fitted to leading picket. When call is registered raises after closing gate retiring cam collapses releasing the lever arm to remake electrical contact and car can then only move from landing to any other floor.</p>			
		<p>9 ELECTRIC CABLE/WIRING: ISI Copper We shall be using only copper wire of appropriate size for different circuits. All wiring will be done in the trucking from machine room to half way junction box and necessary taping will be taken to the landing boxes and locks by means of flexible conductors with suitable lug.</p> <p>10 ROPES: Usha-Martin The elevators will be provided with steel hoist ropes suitable for elevator application. The hoist ropes will include adjustable self aligning hitches.</p> <p>C. MANUAL DOORS FOR CAR AND LANDING DOORS: Standard There are different types of Manual doors available to suit the requirements. They are Collapsible Doors, Imperforated Door and Swing Doors (only for landings).</p> <p>1. COLLAPSIBLE DOOR: Each landing entrance is provided with a top hung steel collapsible gate fitted with ball bearing roller and is arranged with a special bottom track made of aluminum or steel.</p> <p>2. IMPERFORATED DOOR: These doors are designed to replace collapsible doors to offer greater safety against fire and other hazards, and to protect passenger from the fire hazards for reasonable time.</p> <p>3. SWING DOOR: Each landing entrance is provided with MS swing doors with elegant frames and concealed or usual door closer with vision panel. The beck provided for electric contract to meet the requirements of safety, so that the lift will not move unless the door is closed. Swing doors are recommended for use on landings where lobby width is sufficient to fully open the door with adequate clearance from opposite wall to landing entrance.</p> <p>D. DRIVES – Variable Voltage Variable Frequency Drive (v3f). This system is most ideal for elevator motion control. Its saves power up to 40%, it reduced traveling time because of direct landing approach, smooth start/ stop with better traveling comfort, reduced cable size because of low current, jerk less operation. Reduce wear & tear of moving components enhancing the overall life of the equipment. It</p>			

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2	3.00	Providing & Fixing of Interactive Display 86" • Stunning 4K UHD resolution redefines clarity • High accuracy touch screen • built-in Android writing software with hand writing recognition and object recognition • 4K Android system UI(OPS is also 4K). Three Launchers design for your choice • 4 way Split Screen in Whiteboard mode • 4 wireless device sharing simultaneously • Screen Capture to save and email • support auto turn off,sleep timer and the other features• support HDCP2.2(HDMI1.4/2.0) • 20 Points touch (Windows) 10 Points Writing (Android) [Make: Vivitek, Delta.]	No		
3	1.00	Providing & Fixing of ePodium Ultra.Classroom/Training room/Auditorium Room Capacity: 60 to 80 seater.4 speakers. All in one DSP. 21' Monitor. Mic.metalic body	No		
4	3.00	4K conferencing camera:- Supply, Installation, testing, and commissioning of conferencing Camera, shall be designed to connect with soft codec conferencing systems, shall be capable of transmitting video signals of up to 1080p resolution at 30 frames per second. Should have a 120° field-of-view, shall include a camera with 5x zoom and electronic pan, tilt, and zoom (ePTZ), Should have multi-microphone array, shall include auto framing capabilities that adjusts the ePTZ to intelligently track users, Should be connected through USB Type C, shall offer simple installation and shall be mountable on a wall or display, Should certified Zoom & Microsoft Teams, shall be CE marked and compliant with the RoHS directive etc. complete.	No		
5	3.00	Supply, Installation, testing, and commissioning of conferencing hub, It shall be designed to connect soft codec conferencing systems with in-room audio and video devices, Shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector, It shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports, shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device, shall be equipped with one HDMI port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology, shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output, It shall be CE marked, UL listed, and compliant with the RoHS directive etc. complete.	No		
6	3.00	Certified meeting room bundle; includes 1 TesiraFORTE X 400, 1 Parlé TCM-XA (white), 1 pair of Desono C-IC6 loudspeakers (white), 1 BPAK, (1) 25 ft (7.5m) plenum-rated Cat5e cable, (4) 10 ft (3m) plenum-rated Cat5e cable:- Supply, Installation, testing, and commissioning of Conferencing Room Bundle, This equipment shall be TWO ceiling mounted loudspeakers Nominal Maximum SPL @ 1m Peak 112 dB, 60W @ 8Ω (240W peak),Supports both standard category cables and traditional speaker wiring for audio connections . One Beamtracking® ceiling mounted microphones, one integrated PoE+ powered amplifier, and one room hub and audio digital signal processor that shall connect all other devices to an Ethernet network via RJ-45 connectors, The system shall connect to a UC Codec via a USB interface , speaker and DSP both should be Zoom and Microsoft Teams certified. DSP ,Supports simultaneous operation of AVB, Dante, and AES67 digital audio networking protocols, 2 mic/line level inputs, 2 mic/line level outputs, Five 1 Gigabit Ethernet ports, Four ports support PoE+ power (IEEE 802.3.at Class 4, 30W),Up to 2x2 channels of configurable USB audio,4 AEC channels assignable to any input. etc. Complete			
7	6.00	Supply, Installation, testing, and commissioning of HDMI Extender 4K60 Over Ethernet (RX/TX) (70M), The HDMI Extender shall meet the following performance criteria: Supports resolutions up to 4K@60Hz 4:4:4 8bit and HDCP 2.2, Supports HDR (High Dynamic Range), including HDR10 and Dolby Vision*, Over a Cat 6a/7 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 40m/130ft and 1080P up to 70m/230ft, Over a Cat 5e/6 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 35m/115ft and 1080P up to 60m/200ft, Bi-directional PoC, one power adapter at either transmitter or receiver side can power both units, Supports bi-directional IR and RS232 pass-through. etc. Complete			
8	3.00	Supply, Installation, testing, and commissioning of 4K 4x2 HDMI Matrix Switcher, The Matrix switcher shall meet the following performance Criteria: 4xHDMI 2.0b inputs and 2 outputs with HDCP 2.2 compliant, 4K UHD @60Hz with 4:4:4 sampling, plus various HDR support incl., Dolby Vision, HDR10/10+, and HLG, Both HDMI outputs support 4K to 1080P downscaling automatic EDID management HD audio freely crosses from HDMI inputs to HDMI outputs, incl., Dolby Atmos and DTS-X HDMI audio de-embedding for both HDMI outputs with digital S/PDIF and analog stereo outputs, HDMI output 2 supports ARC via optical output Control methods by front buttons, IR and RS-232 etc. complete.			
9	6.00	Supplying, installation, testing and commissioning of Cable cubby, Flip-top Table Interface with 2 Universal Power, Allows to add 2 optional plates or pass-throughs for AV connectivity, BLACK. Note - add plates & keystones as needed			
10	3.00	Supply, Installation, testing, and commissioning of Wireless Presentation hub, The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/video devices on their compatible computing devices via the use of custom USB drivers, Shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector, Shall be equipped with one HDMI port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems, The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive			

BOQ

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11	3.00	Supply , installation, testing and commissioning of 10" Touch Panel, The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control, shall include a 10" capacitive touch high contrast LCD for function selection, shall be made from PVC/ABS material with UV protection additive, shall include sensors that detect ambient light levels and adjust display brightness automatically, shall be powered by PoE (IEEE 802.3at Class 3, 15W), shall be CE marked, UL listed, and compliant with the RoHS directive			
12	3.00	Supply , installation, testing and commissioning of Room Manager room booking system, Should have 8" capacitive touch Display with anti-fingerprint treatment, shall include a 3-way indirect light aura to make room status visible from a distance, shall support power over internet (PoE) or 12V AC/DC power adapter, shall include a proximity sensor to unfold detailed information as you approach the display, shall include support for RFID cards, shall include mounting options for both standard walls and glass walls, Should supports 23 different user interface languages, shall be CE marked and compliant with the RoHS directive			
TOTAL					