

Section 6: Schedule of Supply

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1. List of (Equipment) Goods and Related Services

Package No. G-03			
Package Name: G-03 Procurement of Lab Equipment TTI-Khuruthang Facility Technology			
Item No.	Description	Unit of Measurement	Quantity
1	Bench drilling machine c/w stand	Nos.	5
2	Bench grinder	Nos.	5
3	Hammer Drill Machine (heavy duty)	Nos.	15
4	Bench vise	Nos.	10
5	Digital multimeter	Nos.	24
6	Digital clamp-on meter	Nos.	24
7	Polarity and Ring mains tester	Nos.	15
8	Digital Insulation Resistance tester	Nos.	15
9	Phase sequence tester	Nos.	15
10	Power Quality analyzer	Nos.	15
11	Earth Electrode Tester c/w accessories	Set	15
12	Solar I-V Test kit	Set	15
13	PV Cable Crimping tool	Nos.	15
14	Emergency lighting system	Nos.	15
15	EXIT lighting system	Nos.	15
16	Photovoltaic training bench	Set	5
17	Public Address System Audio Video Aids with trolley	Set	5
18	Electrical installation training bench	Nos.	5
19	Portable Electric Drill	Nos.	15
20	Cordless Portable Screwdriver	Set	30
21	Hydrometer	Set	15
22	Solder Fume Extractor	Set	15
23	Soldering/Desoldering Iron	Set	15
24	Data & Communication Cabling tool	Set	15
25	Audio Video cabling tool	Set	15
26	Workbench	Set	25
27	Storage Cabinet	Set	30
28	Storage pegboard display	Set	20
29	Trolley	Set	10
30	Office table	Nos.	5

31	Office chair	Nos.	5
32	Student chair	Nos.	75
33	Touch interactive panel	Nos.	5
34	Vacuum pump	Set	12
35	Refrigerant Recycling Machines	Nos.	2
36	Air Conditioning training kit with bench	Nos.	6
37	Double hydraulic telescopic ladder	Nos.	5
38	Hot wire anemometer	Nos.	15
39	Water quality testing equipment	Nos.	15
40	Rotary anemometer	Nos.	15
41	Hand held temperature and humidity meter	Nos.	15
42	Non-contact infrared thermometer	Nos.	15
43	Temperature & Humidity Data Logger	Nos.	15
44	Blower	Nos.	5
45	Sling Psychrometer	Nos.	15
46	Sound level meter	Nos.	15
47	Thermo Hygrometer	Nos.	15
48	Wet and dry vacuum cleaner	Nos.	5
49	Manifold gauge	Set	15
50	Flaring and swaging tool	Nos.	15
51	Refrigerant leak detector	Set	15
52	Building Automation Training system board	Set	7
53	Electrical testing trainer bench type	Set	15
54	Electrical fundamental training bench	Set	15
55	Digital LCR meter	Nos.	15
56	Digital wattmeter	Nos.	15
57	Cathode Ray Oscilloscope	Nos.	15
58	Standby generator set	Nos.	1
59	Grid tied solar panel system	Nos.	5
60	Split Air Conditioner Training System board	Nos.	5
61	Core drill	Nos.	5
62	Hydrostatic Test Pump	Nos.	12
63	Drain cleaning machine	Nos.	5
64	Kinetic water-ram	Nos.	10
65	Auger	Nos.	5
66	Pipe bending spring	Set	5
67	Electro fusion machine	Set	1

68	Instantaneous water heater	Set	2
69	Water leakage detector (indoor-outdoor)	Nos.	2
70	Reamer	Nos.	15
71	Snake Drum Auger	Nos.	5
72	Pipe cutter	Nos.	15
73	Wireless Security Camera System	Set	15
74	Bugler alarm system	Nos.	15
75	Crimping tool	Nos.	15
76	Stand Alone Solar PV System Training Station	Nos.	5
77	Fire alarm linkage system training board bench type	Nos.	10
78	Constant Pressure Water Supply Training board bench type	Nos.	10
79	Water Supply and Drainage Pipeline Installation Training Equipment/ board	Set	1
80	Fire detection system programming tool	Nos.	5
81	CT meter	Nos.	15
82	Wire terminal crimping tool	Nos.	15
83	Surveillance System trainer board bench type	Set	5
84	Sprinkler heads	Set	15
85	Water tank	Nos.	2
86	Jockey pump	Nos.	2
87	Fire command center	Set.	2
88	Fire hydrant	Nos.	3
89	Hose reel system	Nos.	5
90	Riser training unit	Set	6
91	Air conditioner (wall mount)	Set	5
92	Air conditioner (cassette type)	Set	5
93	Elevator training unit	Set	2
94	PLC and HMI training Kit	Set	5

2. Delivery and Completion Schedule

The delivery period shall start as of the date of supply order (Equipment).

Package No. G-03				
Package Name: G-03 Procurement of Lab Equipment TTI-Khuruthang Facility Technology				
Item No.	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1	Bench drilling machine c/w stand	90 days	TTI-Chumey	The goods should be delivered to TTI-Khuruthang within 90 days from the date of supply order.
2	Bench grinder			
3	Hammer Drill Machine (heavy duty)			
4	Bench vise			
5	Digital multimeter			
6	Digital clamp-on meter			
7	Polarity and Ring mains tester			
8	Digital Insulation Resistance tester			
9	Phase sequence tester			
10	Power Quality analyzer			
11	Earth Electrode Tester c/w accessories			
12	Solar I-V Test kit			
13	PV Cable Crimping tool			
14	Emergency lighting system			
15	EXIT lighting system			
16	Photovoltaic training bench			
17	Public Address System Audio Video Aids with trolley			
18	Electrical installation training bench			
19	Portable Electric Drill			
20	Cordless Portable Screwdriver			
21	Hydrometer			
22	Solder Fume Extractor			
23	Soldering/Desoldering Iron			
24	Data & Communication Cabling tool			
25	Audio Video cabling tool			

26	Workbench			
27	Storage Cabinet			
28	Storage pegboard display			
29	Trolley			
30	Office table			
31	Office chair			
32	Student chair			
33	Touch interactive panel			
34	Vacuum pump			
35	Refrigerant Recycling Machines			
36	Air Conditioning training kit with bench			
37	Double hydraulic telescopic ladder			
38	Hot wire anemometer			
39	Water quality testing equipment			
40	Rotary anemometer			
41	Hand held temperature and humidity meter			
42	Non-contact infrared thermometer			
43	Temperature & Humidity Data Logger			
44	Blower			
45	Sling Psychrometer			
46	Sound level meter			
47	Thermo Hygrometer			
48	Wet and dry vacuum cleaner			
49	Manifold gauge			
50	Flaring and swaging tool			
51	Refrigerant leak detector			
52	Building Automation Training system board			
53	Electrical testing trainer bench type			
54	Electrical fundamental training bench			
55	Digital LCR meter			
56	Digital wattmeter			
57	Cathode Ray Oscilloscope			
58	Standby generator set			
59	Grid tied solar panel system			


60	Split Air Conditioner Training System board			
61	Core drill			
62	Hydrostatic Test Pump			
63	Drain cleaning machine			
64	Kinetic water-ram			
65	Auger			
66	Pipe bending spring			
67	Electro fusion machine			
68	Instantaneous water heater			
69	Water leakage detector (indoor-outdoor)			
70	Reamer			
71	Snake Drum Auger			
72	Pipe cutter			
73	Wireless Security Camera System			
74	Bugler alarm system			
75	Crimping tool			
76	Stand Alone Solar PV System Training Station			
77	Fire alarm linkage system training board bench type			
78	Constant Pressure Water Supply Training board bench type			
79	Water Supply and Drainage Pipeline Installation Training Equipment/board			
80	Fire detection system programming tool			
81	CT meter			
82	Wire terminal crimping tool			
83	Surveillance System trainer board bench type			
84	Sprinkler heads			
85	Water tank			
86	Jockey pump			
87	Fire command center			
88	Fire hydrant			
89	Hose reel system			
90	Riser training unit			
91	Air conditioner (wall mount)			

92	Air conditioner (cassette type)			
93	Elevator training unit			
94	PLC and HMI training Kit			

3. Technical Specifications for Equipment


1. Bench drilling machine c/w stand

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Type of machine: Bench Type (Belt driven) Drilling Capacity in Steel: Dia.13mm Spindle:</p> <ul style="list-style-type: none"> • Spindle Travel: Minimum 80mm • No. of spindle speed: 04 • Range of Spindle Speed: 500 to 2800 (rpm) • Spindle run out: Maximum 5 to 10 Microns <p>Working Range</p> <ul style="list-style-type: none"> • Distance between spindle center to column-to-column face: Min. 150mm • Distance from spindle nose to working table: Min.275 mm • Distance from spindle nose to base plate: Min.490 mm <p>Size of working table: Min. 210 x 195 mm Size of Base: Min. 225 x 350 mm Electric Motor: Three phase and Minimum 1HP Cable length: minimum 3m Accessories to be included</p> <ul style="list-style-type: none"> • Machine Vice: One Machine Vice of 6" Jaw width to be supplied along with each machine. Provision to be provided for locking of Machine Vice on to the bed. • One set of HSS drill bits of size ranging from 1 to 12.5 mm with box (i.e. 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5, 11.0, 11.5, 12.0 and 12.5, Total 24 Drill Bits) and carbide drill bit set of size ranging from 1mm to 10mm with box (Total-10 Drill Bits) from standard manufacture to be supplied along with machine. • Suitable MS stand floor mounted (Qty: 1No.) to be supplied for mounting drilling machine and necessary fittings to be supplied 		

	<p>along with each machine. Foundation bolts to be provided and vendor has to fix the machine. No vibration to be observed during operation.</p> <ul style="list-style-type: none"> • V-Belt (Qty: 1No.), Reversible switch (Qty: 1No.) and Drill chuck and chuck key (Qty: 2 Nos.) to be supplied along with each machine. • Adjustable LEDlighting (Movable) to be attached with the machine at a suitable location for better visibility. • Name plate mentioning details of the machine to be fixed on the machine front. • Painting of the machine to be done by powder coating. • Small MS Almirah of size LXBXH (2'6'' X 1'6'' X 4'6'') to be provided with the machine (Qty-02 Nos) 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


2. Bench grinder

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)

Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Machine type: Double ended blade (1 coarse and 1 fine) Power consumption: 150W Cable length: Minimum 3m Rotation speed: 3500rpm Input voltage: 230V Wheel hole dia: 12.7mm Wheel outer dia: 150mm Accessories: Circular blade guide with protective eye shield and adjustable LED lighting (Movable) to be attached with the machine at a suitable location for better visibility. Suitable MS stand floor mounted (Qty: 1No.) to be supplied for mounting grinding machines and necessary fittings to be supplied along with each machine. Foundation bolts to be provided. No vibration to be observed during operation.</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

3. Hammer Drill machine (heavy duty)

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Power Source: Corded with minimum of 3m length Maximum Rotational Speed: 1400 RPM Voltage: 250 Volts Amperage: 8 Amps Included Components: 10 Drill Bits (1 to 10 mm), distance marker, and drill box. Special Feature: Vibration Control Handling Number of Speeds: 2 Speed: 1400 RPM Wattage: 700 Watts</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


4. Bench Vise

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

Technical Specification and Minimum Requirements	<p>Jaw size: 115mm opening and 65mm jaw depth Material: Cast Iron Include roll-formed screws and Base bolts (for mounting)</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		


5. Digital Multimeter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> Compact Digital Multimeter with bag Rubber Holster 9-Volt Battery Two Test Leads Type K Thermocouple Probes AC/DC voltage up to 1000 volts, thermocouple temperature measurement from -4 to 1400° F (-20 to 750° C), resistance (40 MΩ), current (10A) plus continuity and diode testing. 		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


6. Digital clamp-on meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Type: CAT III Current Measurement: 400A Resistance measurement: 40MΩ Auto mode selection and Auto range selection Voltage: 1000 V AC and DC Hard Point Test Lead Set Powered by AAA 1.5V battery		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


7. Polarity and Ring mains tester

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>11mA 230V ac</p> <p>LED (Light Emitting Diode) display type</p> <p>Earth loop impedance test</p> <p>Three pins</p> <p>Mains power source</p> <p>Voltage of 230 V AC</p> <p>Wiring check</p> <p>Vivid LEDs indicate a range of wiring conditions including :</p> <p>Correct live / neutral reverse Live / earth reverse Missing earth</p>		75dolar

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


8. Digital Insulation Resistance Tester

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Rechargeable battery (charger included) TEST LEAD L9787 ×1, Neck strap Rated output voltage: 1000 VDC Minimum Test Voltage: 250V Maximum Test Voltage: 2000V Maximum Insulation Resistance Measurement: 2GΩ Display Type: LCD Test Current: ≤200mA Minimum Operating Temperature: 0°C Maximum Operating Temperature: +40°C Power Source: Battery Safety Category Level: CAT III Safety Category Voltage: 2000V Safety Category: CAT III 2000V		100,000

			
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


9. Phase Sequence meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

<p>Technical Specification and Minimum Requirements</p>	<p>LED indication of both clockwise and anti-clockwise rotation Connection type: Test Probe Overvoltage Category: CAT IV 600V Display type: LED Safety Category: CAT III 600V Power source: Battery (AA) Frequency: 15 to 410Hz Operating Temperature: -10°C to +50°C Maximum Voltage: 690V</p> 		
<p>Other Requirements</p>	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


10. Power Quality Analyzer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and	Absolute Maximum Current Measurement: 999.9A Absolute Maximum Power Measurement: 999.9kW		

Minimum Requirements	<p>Number of Phases: 3 Maximum Voltage: 999.9V Best Voltage Measurement Accuracy: $\pm 0.3\% \pm 10$ Digits Best Current Measurement Accuracy: $\pm 0.5\% \pm 15$ Digits Display Type: LCD Measurement Type: AC Current, AC Voltage, AC Wattage, Frequency, Harmonic, Phase Angle, Power Energy, Power Factor, Three Phase Sequence Detection Interface Type: USB Power Source: Battery (AA) Maximum Frequency: 60Hz Maximum Operating Temperature: $+50^{\circ}\text{C}$ Minimum Operating Temperature: 0°C</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


11. Earth Electrode Tester c/w accessories

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and	<p>Measurement Ranges Earth Resistance: 0~12 Ω/0~120 Ω/0~1200 Ω Earth Voltage [50,60Hz]: 0~30V AC</p>		

Minimum Requirements	<p>Accuracy Earth Resistance: $\pm 3\%$ of full scale Earth Voltage: $\pm 3\%$ of full scale Overload Protection Earth Resistance: 276V AC for 10 second across 2 of the 3 terminals Earth Voltage: 276V AC for 1 minute Safety Standard IEC 61010-1 CAT.III 300V Pollution Degree 2, IEC 61557 Withstand Voltage 3700V AC for 1 minute Power Source: (AA) (1.5V) \times 6 Accessories: (Earth resistance test leads) \times 1set (red-20m, yellow-10m, green-5m), (Auxiliary earth spikes) \times 4 nos., (Simplified measurement probe) \times 1set (AA) \times Neck strap, and Carrying Case: (Hard case)</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


12. Solar I-V test kit

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

<p>Technical Specification and Minimum Requirements</p>	<p>Irradiance Meter: A pocket-sized device combining a solar detector and meter for single-handed use, especially useful on sloping roofs.</p> <p>Measurement Range:</p> <ul style="list-style-type: none"> • Irradiance: 0 to 2000 W/m² • Temperature: -25°C to 60°C (-13°F to 140°F) <p>Features:</p> <ul style="list-style-type: none"> • Large, easy-to-read display • Measurement of both irradiance and temperature • Compatible with the Fluke Connect app for data logging • Can be used for PV system commissioning and maintenance <p>Power Supply:</p> <ul style="list-style-type: none"> • Powered by a rechargeable battery <p>Accuracy:</p> <ul style="list-style-type: none"> • ±5% of reading at 1000 W/m² for irradiance <p>Connectivity:</p> <ul style="list-style-type: none"> • Bluetooth for wireless data transfer <p>AVO410 Multimeter:</p> <ul style="list-style-type: none"> • CAT IV 600 V safety rating • 1000 V DC / 750 V AC • 10 A AC/DC range • True RMS readings on AC ranges • Additional functions include resistance, frequency, and capacitance. <p>Test Leads:</p> <ul style="list-style-type: none"> • One pair of 1.3-meter test leads with 4 mm plugs and MC4 connectors. • One pair of 0.2-meter MC3 to MC4 adapter leads. <p>Storage: The kit is supplied with a zipped pouch for easy storage and transport.</p> 		
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Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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13. PV Cable crimping tool


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Material: High Carbon Steel</p> <p>Durable Construction: Made from corrosion-resistant materials.</p> <p>Crimping Capacity: Supports cable sizes 2.5 mm² to 10 mm² (AWG 14-8) with dies for MC4 and other connectors.</p> <p>Crimping Type: Hexagonal or indent crimping for secure connections.</p> <p>Handle Design: Ergonomic, non-slip grips and spring-loaded mechanism.</p> <p>Multiple Die Sets: Interchangeable dies for various sizes.</p> <p>Portability: Includes a carrying case.</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. 		

	<ul style="list-style-type: none"> Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		
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14. Emergency lighting system

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Wattage: 2 x 3W LEDs IP Rating: IP65 (dust and water protection) Luminosity: 340 lumens Operation: Non-maintained (3-hour battery operation) Battery: 3.6V 6Ah NiCd Body: Polycarbonate, lightweight (2.8 kg) Dimensions: 300 mm x 297 mm x 73 mm Voltage Rating: 230V</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		


15. EXIT lighting system

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Dimensions: 265 x 210 x 45 mm Lamp: 14 x 0.125 W LED Duration: 3 hours emergency power Fitting: Bulkhead, wall-mounted IP Rating: IP20 (dust and shock protection) Voltage: 220-240 V AC Wattage: 1.75 W total Maintenance: Maintained and non-maintained modes Energy Efficiency: 50 lumens output</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

16. Photovoltaic training bench


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	MR316E equivalent/Higher		

Country of Origin			
Technical Specification and Minimum Requirements	<p>1. General Features</p> <ul style="list-style-type: none"> Aluminum profile column frame structure with built-in measuring instruments and training power supply. Equipped with universal wheels for mobility and ease of use. Fully equipped experimental circuit and device setup to support various training courses. Integrated safety protection system for enhanced security. <p>2. Performance Parameters</p> <p>2.1 Solar Power Generation Device</p> <ul style="list-style-type: none"> All-aluminum alloy structure. Adjustable photovoltaic panel angle. Analog light source with vertical adjustment of 120 degrees. Dimensions: 1230mm × 753mm × 1250mm (L × W × H). <p>2.2 Training Power Box Frame</p> <ul style="list-style-type: none"> Aluminum frame structure. Modular aluminum alloy box unit. Dimensions: 1100mm × 300mm × 750mm (L × W × H). <p>2.3 Solar Panel Parameters</p> <ul style="list-style-type: none"> Rated Peak Power: 30W Short Circuit Current: 1.9A Maximum Current: 1.71A Maximum Voltage: 17.6V Short Circuit Current: 1.87A Open Circuit Voltage: 21.6V <p>2.4 Battery Specifications</p> <ul style="list-style-type: none"> Voltage: 12V Capacity: 7AH Battery Loss: 10V ± 1V Compliance: GB/T 9535 Relative Humidity: 35~85% RH (non-condensing) <p>2.5 Working Environment</p> <ul style="list-style-type: none"> Operating Temperature: -10°C to +40°C Maximum Temperature: ≤80°C Ambient Conditions: Non-corrosive, non-flammable, no large amounts of conductive dust. <p>3. Product Composition</p> <p>3.1 Training Platform Unit</p>		114,770

	<ul style="list-style-type: none"> • Power Box • Solar Controller Hanging Box • Inverter Hanging Box • Load Hanging Box • Measuring Instrument Hanging Box (2 units) • Transformer Module <p>3.2 Training Frame</p> <ul style="list-style-type: none"> • Aluminum profile column frame structure. • Integrated measuring instruments and power supply. • Universal wheels for enhanced mobility. <p>3.3 Power Box Components</p> <ul style="list-style-type: none"> • Power Circuit Breaker • Emergency Stop Button • Battery Unit • DC Measuring Instrument • Analog Light Source Switch • Photovoltaic Panel Power Unit • European Socket 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

17. Public Address System Audio Video Aids


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)

Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Public Address System Audio Video Aids (AVA)</p> <ul style="list-style-type: none"> - Packs up into a single portable unit -Dual 2-way speaker enclosures with 6" woofers and 1" HF drivers -Lightweight, Class D amplifier produces 2 x 75 watts of stereo power -Removable 5-channel mixer -Three Mic/Line inputs (XLR and 1/4" jacks) for microphone and line level devices -1/4" and 1/8" stereo input for MP3 players, keyboards and more -Bass and treble controls on each channel <p>Internal digital effects processor Phantom power for condenser microphones -Durable ABS high-impact plastic construction -Integrated 1 3/8" speaker stand mount Tilt-back design for using speakers as floor monitors -Two 10" speaker cables - 60 Inch (4:3) X-Tension Projector Screen - 1080P Full HD 4K Projector Portable Beamer 8500 Lumens Auto Keystone Home Cinema Classroom Office</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

18. Electrical installation training bench


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the

			original brochures)
Make and Model	DLDS-1214F equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>Outline dimension</p> <ul style="list-style-type: none"> Ladder structure, outer side is established by patch board, and inner side is established by five simulation metopes. Left hand panel board (A) /1200mm x 2400 x1.8 mm Right hand panel board (B) /1200mm x 2400 x1.8 mm <p>Front panel board dimension</p> <ul style="list-style-type: none"> Panel board (1) 1000 x 952.5 x 1.8mm two plates Panel board (2) 1000 x 792.5x 1.8mm two plates Panel board (3) 1745 x 378 x 1.8mm one plate Ceiling board (D) /front 2624mm, back 1816 mm, depth:1262 mm <p>The included angle between the left panel and the main panel is 109.</p> <p>Operation desk: 1500(L)X750(W)X800(H) Input power: three phase three wires 380V±10% 50HZ</p> <p>Working environment: environment temperature range - 5 ~ 40°C</p> <p>Capacity: AC < 4KVA</p> <p>Safety Protection: leakage protection working current ≤ 30mA), overcurrent protection, overload protection, emergency stop protection, undervoltage protection</p> <p>Relative humidity: < 85</p> <p>Training projects</p> <ul style="list-style-type: none"> Skill training of basic electrical installation <ol style="list-style-type: none"> The practical training of installation tools The practical training of measuring instruments The practical training of processing PVC bending pipe by hand bending machine, etc. Indoor lighting and power distribution <ol style="list-style-type: none"> One switch to control one lamp and socket Two dual joint switches to control one lamp Three switches to control one lamp Air conditioning socket to control circuit Digital segment switch to control lamp 		3k

	<ul style="list-style-type: none"> • Electrical control <ol style="list-style-type: none"> a. Jog control circuit by asynchronous motor b. Asynchronous motor self-locking control circuit c. Asynchronous motor control circuit at two places d. Sequence start of three phase asynchronous motor by hand e. Asynchronous motor button Y-Δ control circuit f. KNX overall installation and wiring training, etc. 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

19. Portable Electric Drill

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Motor: EC Brushless, 490 in.-lbs. torque</p> <p>Speed: Two-speed gearbox:</p> <ul style="list-style-type: none"> • High-torque driving: 0-460 RPM • High-speed drilling: 0-1,800 RPM <p>No-load BPM: 0-22,000</p> <p>Chuck: 1/2" keyless all-metal</p>		

	<p>Clutch: 20+1 settings Design: Ergonomic grip, LED light, belt clip Weight: 2.4 lbs. (tool only) Dimensions: 7.44" (L) × 8.1" (H) × 3" (W) Battery: 18V qty. 2 nos. with a charger Protection: Electronic Motor Protection with a hard case Warranty: 5 years</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		




20. Cordless Portable Screwdriver

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Battery: 3.6V, 2.0Ah, USB-C charging Torque: 5/2 Nm (hard/soft), 7 settings + max mode Speed: 306-396 rpm Bit Holder: 1/4" Hex Universal Weight: 0.32 kg Activation: Push-to-start & button press LED Ring: Illuminates work area & shows battery status Accessories: Carry case Qty.1 no., Micro USB cable(charger) Qty. 1 no. and 33-piece screwdriver bit set (including Posidrive, Phillips, Trox, square head, and hex types)</p>		

	 <p>A CARRY CASE MICRO USB CABLE 33-PIECE SCREWDRIVER BIT SET</p>		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


21. Hydrometer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Measurement Range:</p> <ul style="list-style-type: none"> • Density: 0.000 – 2.000 g/cm³ • Sample Temperature: 0 – 40 °C (32 – 104 °F) • Viscosity: 0 – 2,000 mPa·s <p>Accuracy:</p> <ul style="list-style-type: none"> • Density: ±0.001 g/cm³ • Temperature: ±0.2 °C (±0.4 °F) <p>Resolution:</p> <ul style="list-style-type: none"> • Density: 0.0001 g/cm³ <p>Calibration Method:</p> <ul style="list-style-type: none"> • Automatic with distilled water <p>Data Transfer:</p> <ul style="list-style-type: none"> • Wireless communication infrared data interface for data exchange with a PC and data export to a printer <p>Display:</p>		

	<ul style="list-style-type: none"> • Backlit LCD <p>Internal Storage:</p> <ul style="list-style-type: none"> • Up to 1,100 results <p>Operating Environment:</p> <ul style="list-style-type: none"> • Temperature: 10 – 50 °C (50 – 122 °F) <p>Power Requirements:</p> <ul style="list-style-type: none"> • Two AAA batteries <p>Dimensions:</p> <ul style="list-style-type: none"> • 229 x 114 x 64 mm (9 x 4.5 x 2.5 inches)   		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


22. Solder Fume Extractor

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>12V Fan fume extractor with adaptor</p> <p>Non-slip heavy-duty rubber feet anchor the unit to the ground.</p> <p>2800 RPM high suction fan and low noise</p> <p>Size: 6.3" x 5.3" x 1.96"</p>		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


23. Soldering/Desoldering Iron

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Power Output: 60 watts</p> <p>Temperature Range: Adjustable from 392°F to 896°F (200°C to 480°C)</p> <p>Temperature Display: Dual digital display supporting both Fahrenheit (°F) and Celsius (°C)</p> <p>Sleep Mode: 10-minute inactivity sleep function</p> <p>Heating Technology: Fast heating with advanced temperature control technology</p> <p>Design: Ergonomic, lightweight handle for comfortable use</p> <p>Included Accessories: 5 extra different sizes of iron tips, soldering iron holder, de-soldering pump, Brass Tip Cleaner, Sponge Tip Cleaner and 100g Soldering Lead</p>		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

24. Data & Communication Cabling tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Includes:</p> <ul style="list-style-type: none"> • Snip (high-carbon steel) • Coax Stripper (precision stripping) • Punch down Tool (cable termination) • Compression Crimper (F, BNC, RCA) • Modular Crimper (RJ45, Ethernet) • Scout Pro 3 Tester (RJ11, RJ45, Coax) • Carrying Case <p>Specs:</p> <ul style="list-style-type: none"> • Use: Twisted pair & coax cables • Material: Metal & plastic • Size: 11.1" x 10.9" x 4.1"; Weight: 5 lbs. • Drop Protection: 9.8 ft • Battery: 1 x 9V (included) 		

	<ul style="list-style-type: none"> • Supports: CAT3, CAT5E, CAT6, RG59, RG6 • Connections: RJ11, RJ45, Coax F 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


25. Audio Video cabling tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Includes:</p> <ul style="list-style-type: none"> • Crimping tool (RJ11/RJ12/RJ45) • Punch down tool (66 & 110/88 blades) • Screwdriver • Knife • LAN cable tester (RJ11/RJ45) • Lightweight hard case 		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


26. Workbench

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Dimensions:</p> <ul style="list-style-type: none"> • Length: 60 inches • Width: 30 inches • Height: adjustable from 29.5 to 39.4 inches, <p>2. Load Capacity:</p> <ul style="list-style-type: none"> • Supports up to 2,000 lbs., accommodating heavy-duty tasks. <p>3. Materials:</p> <ul style="list-style-type: none"> • Tabletop: Solid rubber wood 50 mm thick table top providing a durable and smooth work surface with ocean blue insulated 5 mm rubber pad. • Frame: Precision-cut steel, ensuring stability and strength. <p>4. Height Adjustment:</p>		

	<ul style="list-style-type: none"> Features six height settings, adjustable from 29.5 to 39.4 inches, allowing customization for various tasks and user preferences. <p>5. Mobility:</p> <ul style="list-style-type: none"> Equipped with four casters, facilitating easy movement. Two of the casters are lockable, ensuring stability during use. <p>6. Additional Features:</p> <ul style="list-style-type: none"> Minimum three single phase (230V) power outlet attached. 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		


27. Storage Cabinet

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification	Dimension: 185cm(H) x 90cm (W) x 40cm (D) Shelves: 4 shelves		

and Minimum Requirements	Lock: With lock and 3 sets of keys Material: Steel 18 gauge with metallic paints 		
Other Requirements	Supplying and installation of the equipment on site. The following documents & certificates to be provided along with each machine. <ul style="list-style-type: none"> • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


28. Storage pegboard display

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Material: MS Surface finish: Polished Height: 7 feet Width: 4 feet Capacity: Max. 180kg/shelf Wheels: castor wheels with lock Lock: Lockable with 3 sets of keys Pegboards with 300 pegs Drawers: 4		

	<p>Duo Storage: 14 small storage cubbies and 28 medium cubbies</p> 		
Other Requirements	<p>Supplying and installation of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


29. Trolley

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Type: Hand trolley Dimension: 910 X 610 mm Platform material: Steel/metal Handle: Foldable type Handle height: 860 mm Load capacity: 300kg Wheel: Rubber type No. of wheels: 4</p>		

			
Other Requirements	<p>Supplying and installation of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


30. Office table

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Material: Stainless Steel (SS)</p> <p>Size (Inch): W60 x D30 x H30</p> <p>L_shaped table</p> <p>Finish: Ice beech finish</p> <p>Table top material: Engineered wood (Rubber wood)</p> <p>Storage: With 2 storages</p> <p>Features: With Shelves</p>		

			
Other Requirements	<p>Supplying and installation of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


31. Office chair

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Upholstery: Mesh fabric</p> <p>Recommended height: 5ft5in – 6ft3in</p> <p>Maximum height: 135kg</p> <p>Seat depth: 19.3in – 20in</p> <p>Backrest height: 28.7in - 33.5in, 3-level backrest tilt (95°, 113°, 135°)</p> <p>Hydraulics: Class 4</p> <p>Ergonomic Design: Contoured mesh backrest with adjustable headrest; 3-level backrest tilt (95°, 113°, 135°).</p> <p>Wheel: Aluminum wheelbase</p>		

			
Other Requirements	<p>Supplying and installation of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • 2-year warranty with dedicated customer service. • Any other relevant documents (if any). 		

32. Student chair

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Ergonomic Design: Lumbar support, adjustable height, reclining/rocking feature.</p> <p>Seat & Cushioning: Padded seat with breathable mesh or high-density foam.</p> <p>Material: Sturdy metal frame, cushion seat and back</p> <p>Armrests: Fixed with cushion</p> <p>Mobility: 360° swivel, smooth-rolling casters, anti-tip design.</p> <p>Weight Capacity: 250-300 lbs (113-136 kg).</p> <p>Space-Saving: Compact, stackable</p> <p>Extras: Foot bushes</p>		

			
Other Requirements	<p>Supplying and installation of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 2-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


33. Touch interactive panel

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	IFP Android 14		
Country of Origin			
Technical Specification and Minimum Requirements	Type:		
	Flat type		
	Screen Size		
	98 Inch		
	Power Consumption		
	220 - 300 W		
	Included Accessories		
	Remote control, Power cord, Wi-Fi antenna, USB Touch Cable		
	Touch Points		
	10 / 20 Point High - Resolution Touch		
	Aspect Ratio		
	16: 9		
	Brightness		
	450cd/m2		
	Weight		
	70 kg/ 80 kg		


	Technology	OLED		
	Resolution	4K Ultra High Definition (3840x2160) @60Hz		
	Response Time	4ms		
	Operating Systems Supported	Android 4.1 Afterward; IOS 6.0 Afterward; Win 7 / 8.1 / 10 (Win7 Require Driver Software)		
	Board Size	98 inch		
	RAM	4 GB		
	Wireless Connection	WIFI 802.11 b/g/n ac (2T2R)		
	LAN	10/100 mbps Ethernet		
	Storage	32 GB		
	Viewing Angle	178 Degree		
	Wi - Fi	WiFi 802.11 b/g/n/ac (2T2R)		
	Supported Colors	1.07B Colors		
	Display Orientation	Landscape / Portrait		
	Interface	HDMI, USB, VGA, PC Audio, AV, Display, RS232, RJ45, TV Mic		
	Glass	4mm Tempered Anti-Glare Glass		
	Bluetooth	Optional		
	Backlight	LED		
	Contrast Ratio	5000:1		
	Model	Royal Series		
	Supported OS	Windows 7, 8.1, 10; Mac OSX, Linux		
	Function	Miracast, Dlna, AirPlay / AirPlay mirror		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 			

34. Vacuum pump

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Power Supply: 230V, AC, 50Hz Compatible Refrigerants: R4040a, R410a Application: Suitable for vacuuming small to 7HP class refrigeration and air conditioning systems Vacuum Type: High vacuum, 2-stage Oil Backflow Prevention: Electromagnetic oil backflow prevention valve Inhalation Port: 1/4, 5/16 (Flare male) Motor Power: 100V, 250W Pump Speed:</p> <ul style="list-style-type: none"> 1440 min⁻¹ (50Hz) 1720 min⁻¹ (60Hz) <p>Vacuum Degree: 2.0 Pa (15 microns) Oil Volume: 260 mL Evacuation Speed:</p> <ul style="list-style-type: none"> 51 L/min (50Hz) 57 L/min (60Hz) <p>Dimensions (L × W × H): 308 × 124 × 230 mm Weight: 9.4 kg Compatible Refrigerant Systems: CFC, HCFC, HFC Included Accessories: Vacuum pump oil (0.35L) and adapter 1/4" female x M10 male</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		

35. Refrigerant Recycling Machines

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Operation: Auto liquid-to-vapor recovery. Safety: High-pressure cut-out switch. Compressor: Oil-less for fast liquid transfer, 100:1 compression ratio Power: 240V, 50 Hz Cooling: High-efficiency fan & large condenser. Self-Clearing: Prevents cross-contamination. Accessories: Four 60" hoses with ball valves. Optional: Float cable for auto shut-off at 80% tank capacity. Approvals: ARI-740, UL, CE and TUV</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


36. Air Conditioning training kits with bench type

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Dimensions and Power Supply:</p> <ul style="list-style-type: none"> • Dimensions: 1000mm (L) x 1600mm (W) x 1800mm (H) • Power Supply: AC 220V, 50Hz <p>Refrigeration System:</p> <ul style="list-style-type: none"> • Refrigerant Type: R134a • Refrigerant Pressure: <ul style="list-style-type: none"> ○ Low Pressure: 0.15–0.35 MPa ○ High Pressure: 1.5–2.0 MPa <p>Components:</p> <ul style="list-style-type: none"> • Mobile Stand with Test Panel • Ignition Switch • High/Low Pressure Gauge • Air Conditioning Controller • Evaporator Assembly • Air Compressor • Expansion Valve • Dryer • Blower • Condenser • Drive Motor • Cooling Electronic Fan • Fault Set Module (Manual Switch Type) <p>Main Features:</p> <p>37. Utilizes an original automotive air conditioning system to demonstrate its structure and function.</p> <p>38. Employs an AC motor to drive the air conditioning compressor, allowing realistic operation via the control panel.</p> <p>39. Features a panel with circuit diagrams and schematics for visual learning and analysis.</p>		

	<p>40. Equipped with test terminals to measure electrical signals such as resistance, voltage, and current across various components.</p> <p>41. Enables practical training in refrigerant filling and leak detection.</p> <p>42. Includes a fault-setting module for diagnostic exercises.</p> <p>Training Capabilities:</p> <ul style="list-style-type: none"> • Introduction to the main components of the automotive air conditioning system. • Demonstration of the system's working principles and processes. • Measurement of sensor and actuator signals. • Practical exercises in vacuum pumping, refrigerant filling, and leak detection. • Fault setting and troubleshooting practice. <p>This trainer offers a comprehensive platform for understanding and practicing the installation, operation, and maintenance of automotive air conditioning systems.</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

37. Double hydraulic telescopic ladder


Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Material: Constructed from high-quality aluminum, ensuring a lightweight yet sturdy structure.</p> <p>Design: Features a double-sided, multi-purpose configuration, allowing it to be used in various positions such as an A-frame, extension, or scaffold.</p> <p>Hydraulic Mechanism: Equipped with a double hydraulic system for smooth and effortless height adjustment.</p> <p>Extended Height: Each side extends to 3.1 meters, providing a maximum reach suitable for tasks at elevated heights.</p> <p>Load Capacity: Engineered to support a safe working load of up to 150 kilograms, accommodating a wide range of users and equipment.</p> <p>Safety Standards: Manufactured in compliance with European safety standard EN131, ensuring reliability and user safety.</p> 		

Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		
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38. Hot wire anemometer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> Air Velocity Range: 0.1 to 25 meters per second (m/s) Temperature Range: 0°C to 50°C Relative Humidity Range: 0% to 80% Measurement Units: m/s, km/h, ft/min, MPH, knots; temperature in °C and °F Display: Large LCD with backlight Features: <ul style="list-style-type: none"> Telescoping probe suitable for HVAC ducts and small vents Combines hot wire and standard thermistor for rapid, precise measurements Records maximum/minimum readings with recall and data hold Microprocessor ensures high accuracy Portable design for fast, accurate readings <p>Applications: Environmental testing, air conveyors, flow hoods, clean rooms, air velocity assessments, air balancing, fans/motors/blowers, furnace velocity, and refrigerated cases.</p> <p>Included Accessories: Probe, USB cable, DC power adaptor, 3.7V Li-Po battery, CD-ROM, operating instructions, and storage case.</p>		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


39. Water quality testing equipment

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Measurement Parameters: Tests 27 water quality parameters, including pH, chlorine, alkalinity, hardness, and more.</p> <p>Connectivity: Features Bluetooth and Wi-Fi capabilities for seamless data transfer.</p> <p>App Integration: Compatible with the LabCom app for detailed analysis and record-keeping.</p> <p>Waterproof Rating: IP68, ensuring durability and reliability in aquatic environments.</p> <p>Reagent Compatibility: Supports both solid and liquid reagents for versatile testing options.</p>		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


40. Rotary anemometer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Wind Speed Measurement:</p> <ul style="list-style-type: none"> • Units: m/s, ft/min, knots, km/h, mph • Range: 0.3 to 30 m/s; 99 to 5860 ft/min; 1 to 55 knots; 2 to 90 km/h; 1 to 65 mph • Accuracy: $\pm 5\%$ of reading <p>Wind Temperature Measurement:</p> <ul style="list-style-type: none"> • Range: -10 to 45°C (14 to 113°F) • Accuracy: $\pm 2^{\circ}\text{C}$ ($\pm 3.6^{\circ}\text{F}$) <p>Features:</p> <ul style="list-style-type: none"> • LCD backlight for visibility in low-light conditions 		

	<ul style="list-style-type: none"> Selectable temperature units: Celsius (°C) or Fahrenheit (°F) Wind chill indication Manual and auto power off options Displays current, average, maximum, and minimum wind speeds Five selectable wind speed units: m/s, ft/min, knots, km/h, mph <p>Dimensions:</p> <ul style="list-style-type: none"> Product size: 16.48 x 8.48 x 3.78 cm Weight: 131.54 grams <p>Power Supply:</p> <ul style="list-style-type: none"> Powered by 2 x 1.5V AAA batteries 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		

41. Hand held temperature and humidity meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

Technical Specification and Minimum Requirements	<p>Temperature Measurement:</p> <ul style="list-style-type: none"> • Range: -50°C to +200°C (-58°F to +392°F) • Accuracy: $\pm 2^{\circ}\text{C}$ ($\pm 4^{\circ}\text{F}$) • Resolution: 0.1° <p>Measurement Rate: 1 reading per second</p> <p>Features:</p> <ul style="list-style-type: none"> • Auto power off after 10 minutes • High/Low temperature alarm with adjustable settings • Low battery indication • Displays maximum and minimum readings <p>Alarm Temperature Range: -40°C to +200°C (-40°F to +392°F)</p> <p>Dimensions: 113 x 61 x 13 mm</p> <p>Temperature Scale Options: Celsius and Fahrenheit</p> <p>Number of Temperature Inputs: 1</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

42. Non-contact infrared thermometer


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			

Country of Origin	
<p>Technical Specification and Minimum Requirements</p>	<p>Measurement Temperature Range:</p> <ul style="list-style-type: none"> FT3700-20: -60.0°C to 550.0°C (-76°F to 1022°F) <p>Accuracy:</p> <ul style="list-style-type: none"> -35.0°C to -0.1°C (-31.0°F to 31.9°F): ±10% of reading ±2°C 0.0°C to 100.0°C (32.0°F to 212.0°F): ±2°C 100.1°C to 500.0°C (212.1°F to 932.0°F): ±2% of reading Note: Accuracy not specified for ranges -60.0°C to -35.1°C (-76.0°F to -31.1°F) and above 500.1°C (932.0°F) <p>Response Time:</p> <ul style="list-style-type: none"> 1 second (90%) <p>Measurement Wavelength:</p> <ul style="list-style-type: none"> 8 to 14 µm <p>Thermal Emissivity Compensation:</p> <ul style="list-style-type: none"> Adjustable from ε=0.10 to 1.00 in 0.01 steps <p>Measurement Field Diameter:</p> <ul style="list-style-type: none"> FT3700-20: Distance-to-Spot Ratio of 30:1 <p>Sighting:</p> <ul style="list-style-type: none"> Two-beam laser marker, Max 1 mW (Class 2), Red <p>Functions:</p> <ul style="list-style-type: none"> Continuous measurement mode MAX/MIN/DIF (MAX - MIN)/AVG measurement Alarm Backlight Auto power-off <p>Power Supply:</p> <ul style="list-style-type: none"> 2 x LR03 (AAA) alkaline batteries, 150 mVA Continuous use of 140 hours (with laser marker, backlight, and buzzer off) <p>Dimensions and Mass:</p> <ul style="list-style-type: none"> 48 mm (1.89 inches) W × 172 mm (6.77 inches) H × 119 mm (4.69 inches) D 256 g (9.0 oz), including batteries <p>Included Accessories:</p> <ul style="list-style-type: none"> Instruction manual ×1 LR03 alkaline batteries ×2 Carrying case ×1

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

43. Temperature & Humidity Data Logger


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Measurement Parameters:</p> <ul style="list-style-type: none"> • Temperature: <ul style="list-style-type: none"> ○ Range: -200°C to 1300°C (-328°F to 2372°F) ○ Accuracy: $\pm 0.15\%$ of reading $\pm 1.0^\circ\text{C}$ (for -100°C to 1300°C) • Humidity: <ul style="list-style-type: none"> ○ Range: 0% to 100% RH ○ Accuracy: $\pm 3.0\%$ RH (40% to 60% RH) <p>Memory Capacity:</p> <ul style="list-style-type: none"> • 67,584 readings (each for Temperature, Humidity, Temp.K1, Temp.K2) <p>Sampling Rate:</p>		

	<ul style="list-style-type: none"> Adjustable from 1 second to 12 hours <p>Display:</p> <ul style="list-style-type: none"> Large LCD screen for real-time data viewing <p>Interface:</p> <ul style="list-style-type: none"> USB connectivity for data download and device configuration <p>Power Supply:</p> <ul style="list-style-type: none"> 3.6V lithium battery Battery life: Approximately 3 months (with a 5-second sampling rate) <p>Dimensions and Weight:</p> <ul style="list-style-type: none"> 94 mm x 50 mm x 32 mm Weight: 91 g <p>Additional Features:</p> <ul style="list-style-type: none"> User-defined alarm thresholds with visual alerts Comes with analysis software compatible with Windows operating systems 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		

44. Blower

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Power Input: 600 W No Load Speed: 16,000 RPM Maximum Air Volume: 4.1 m³/min Maximum Air Velocity: 91 m/s Air Pressure: 5.7 kPa Sound Levels:</p> <ul style="list-style-type: none"> • Sound Pressure Level: 83 dB(A) • Sound Power Level: 94 dB(A) <p>Vibration Level: Operation without Load: 2.5 m/s² Dimensions (L x W x H): 479 x 185 x 178 mm (18-7/8" x 7-1/4" x 7") Net Weight: 1.9 – 2.2 kg (4.3 – 4.8 lbs.) Power Supply Cord Length: 2.5 m (8.2 ft.) Features:</p> <ul style="list-style-type: none"> • Quickly converts to a vacuum for added versatility • Ergonomic handle with soft grip for increased operator comfort • Large trigger with conveniently located lock-on button • Compact and lightweight design for reduced operator fatigue • Unique design allows for easier storage in a self-standing position • Anti-static feature prevents the accumulation of static electricity • Includes large dust bag for vacuum mode • Optional long nozzle available for harder-to-reach areas • Externally accessible brushes for easy maintenance • Double insulated for safety 		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


45. Sling Psychrometer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Humidity Measurement:</p> <ul style="list-style-type: none"> • Range: 1% to 97% Relative Humidity (RH) • Division: 1% • Accuracy: $\pm 1\%$ <p>Temperature Measurement:</p> <ul style="list-style-type: none"> • Range: -5°C to 50°C (20°F to 120°F) <p>Dimensions:</p> <ul style="list-style-type: none"> • Size: 227 x 51 x 16 mm (9 x 2 x 0.63 inches) (W x D x H) • Estimated Shipping Weight: 0.91 kg (2.0 lbs) <p>Features:</p> <ul style="list-style-type: none"> • Handheld device constructed of hard plastic housing two encased red-spirit filled thermometers • Equipped with a water reservoir • Handle folds for easy storage in the included carrying case 		

	<p>Included Items:</p> <ul style="list-style-type: none"> • Sling Psychrometer • Humidity chart • Carrying case with strap 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


46. Sound level meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Sound Level Measurement Range: 30 dB to 130 dB</p> <p>Accuracy: ± 1.5 dB</p> <p>Resolution: 0.1 dB</p> <p>Frequency Weighting: A & C weighting network selection</p> <p>Response Time: Selectable fast/slow response rate</p> <p>Display:</p> <ul style="list-style-type: none"> • 4-digit LCD with bar graph and backlight <p>Data Functions:</p> <ul style="list-style-type: none"> • Maximum locking and automatic shifting • Data hold function • 100-group data storage memory 		

	<p>Compliance: Meets IEC651 Type 2 & ANSI S1.4 Type 2 standards</p> <p>Operating Temperature Range: 0°C to 40°C</p> <p>Power Supply: Requires 4x AAA batteries (not supplied)</p> <p>Included Accessories:</p> <ul style="list-style-type: none"> • Sound meter • Carry case • Manual 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

47. Thermo Hygrometer


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Relative Humidity (RH) Measurement:</p> <ul style="list-style-type: none"> • Range: 5% to 95% RH • Accuracy: $\pm 1.8\%$ RH (from 15°C to 25°C) • Resolution: 0.1% RH <p>Temperature Measurement:</p> <ul style="list-style-type: none"> • Ambient Temperature: 		

	<ul style="list-style-type: none"> ○ Range: -20°C to 70°C ○ Accuracy: $\pm 0.4\%$ of reading $\pm 0.3^\circ\text{C}$ ○ Resolution: 0.1°C ● Dew Point Temperature: <ul style="list-style-type: none"> ○ Range: -40°C to 70°C ○ Accuracy: $\pm 0.8\%$ of reading $\pm 0.6^\circ\text{C}$ ○ Resolution: 0.1°C <p>Display:</p> <ul style="list-style-type: none"> ● 4-line LCD ● Dimensions: 50 x 36 mm ● Two lines of 5 digits with 7 segments (value) ● Two lines of 5 digits with 16 segments (units) <p>Housing:</p> <ul style="list-style-type: none"> ● Material: ABS ● Protection Rating: IP54 <p>Power Supply:</p> <ul style="list-style-type: none"> ● 4 AAA LR03 1.5 V batteries ● Battery Life: Approximately 150 hours <p>Dimensions and Weight:</p> <ul style="list-style-type: none"> ● Weight: 310 g <p>Additional Features:</p> <ul style="list-style-type: none"> ● Adjustment certificate included ● Coiled cable: 0.45 m length, expandable to 2.4 m ● Auto shut-off: Adjustable from 0 to 120 minutes ● Operating conditions: -10°C to 50°C, in non-condensing conditions, up to 2000 m altitude 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> ● Operation/Maintenance manual in English. 		

	<ul style="list-style-type: none"> Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		
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48. Wet and dry vacuum cleaner

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> Power Consumption: 1,100 W Suction Power: 240 Air Watts Container Capacity: 25L (Stainless Steel) Power Cable Length: 5m Accessory Diameter: 35mm Voltage: 220–240V / 50–60Hz Weight: 8.7 kg (without accessories) Dimensions: 418 x 382 x 652 mm <p>Key Features</p> <ul style="list-style-type: none"> Patented Filter System – Quick removal for wet & dry use without replacement. Optimized Floor Nozzle & Hose – Superior cleaning performance. Removable Handle – Attach accessories directly to hose. Filter Cleaning System – Restores suction power at the push of a button. Blower Function – Removes dirt from hard-to-vacuum areas. Parking Position – Convenient pause during cleaning. Cord & Accessory Storage – Space-saving and organized. 3-in-1 Handle – Easy carrying, opening, and emptying. <p>Included Accessories</p> <ul style="list-style-type: none"> 2.2m suction hose, removable handle, two 0.5m suction tubes, floor nozzle, crevice nozzle, fleece filter bag, and flat pleated filter. 		

			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


49. Manifold gauge

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Compatibility: Suitable for refrigerants R410A, R32, R22, and R134a.</p> <p>Gauges:</p> <ul style="list-style-type: none"> • Dual gauges with large 80mm diameter for easy reading. • Displays pressure in PSI and BAR. • Displays temperature in °C and °F. <p>Manifold:</p> <ul style="list-style-type: none"> • Constructed from anodized aluminum alloy. • Equipped with a built-in sight glass. • Includes a swivel hook for hanging. <p>Hoses:</p> <ul style="list-style-type: none"> • Three charging hoses (Red, Yellow, Blue) each 60 inches (1500mm) in length • Pressure tolerance: 800 to 1000 psi • Hose connections: 		

	<ul style="list-style-type: none"> ○ Red and Blue: 1/4" SAE to 5/16" SAE. ○ Yellow: 1/4" SAE to 1/4" SAE. <p>Additional Features:</p> <ul style="list-style-type: none"> ● Extra-large, easy-to-read color-coded dials. ● Rubber gauge sleeve covers for added protection. ● Brass connections. <p>Included Accessories:</p> <ul style="list-style-type: none"> ● Brass adaptor (1/4" Female to 5/16" Male). ● Blow-molded carry case for storage and transport. 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> ● Operation/Maintenance manual in English. ● Warranty certificate: Minimum one year warranty from the date of acceptance of item. ● Any other relevant documents (if any). 		


50. Flaring and swaging tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Flaring Sizes:</p> <ul style="list-style-type: none"> ● 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4" O.D. tubing <p>Swaging Sizes:</p>		

	<ul style="list-style-type: none"> • 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" O.D. tubing <p>Components:</p> <ul style="list-style-type: none"> • Screw-type feed for precise operation • Two flaring bars covering 9 sizes • Swivel-type swaging adapters and flaring cone made of hardened, chrome-finished steel • Self-centering, slip-on forged steel yoke <p>Additional Tools:</p> <ul style="list-style-type: none"> • Tube cutter: suitable for 1/8" to 1-1/8" O.D. tubing • Square reversible ratchet wrench with sizes: 1/4", 3/8", 3/16", 5/16" <p>Storage:</p> <ul style="list-style-type: none"> • Comes in a blow-molded case for organized storage and portability 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

51. Refrigerant leak detector

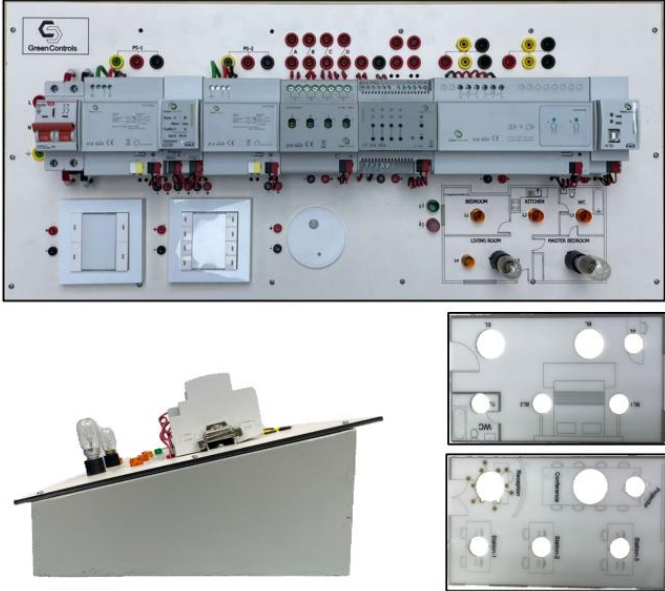
Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)

Make and Model	
Country of Origin	
<p>Technical Specification and Minimum Requirements</p>	<p>Gases Detected: CFCs, HCFCs, HFCs, including R134a, R-22, R-404A, R-410A, R-438A, and R-507. Response Time: Approximately 20 seconds. Application: Designed for refrigeration systems. Meter Type: Handheld device. Display: LED indicators. Alarms: Equipped with both audible and visual alarms. Power Source: Powered by 2 x D batteries. Battery Life: Up to 16 hours of continuous operation. Dimensions: 270 mm (length) x 65 mm (width) x 65 mm (height). Weight: 454 grams. Operating Temperature Range: -20°C to +50°C.</p> 
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any).

52. Building Automation Training System

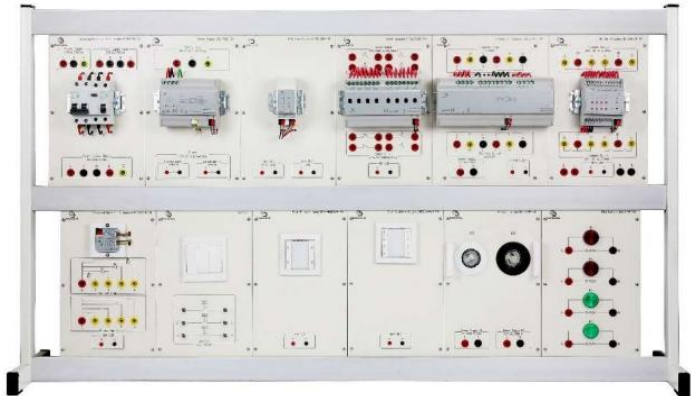
Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Technical Parameters</p> <p>Power Supply, 640mA Module (main line)</p> <ul style="list-style-type: none"> Power : 230V, 50/60Hz Output voltage: 28 - 31V Output current: 640mA Additional Output: 30V DC auxiliary voltage <p>Power Supply, 640mA Module (sub line)</p> <ul style="list-style-type: none"> Power : 230V, 50/60Hz Output voltage: 28 - 31V Output current: 640mA Additional Output: 30V DC auxiliary voltage <p>Line Coupler Module 1</p> <ul style="list-style-type: none"> Operating voltage: 21-32V Operating temperature: - 5 ~ 45 °C Functions: can be used as line/area coupler/line amplifier <p>Output Actuator Module, 4 Fold 1</p> <ul style="list-style-type: none"> Operating voltage over bus: 21-32V Auxiliary voltage: 230V Resistive Load :16 A/230VAC AC1, 16 A/24VDC Manual operation button : 4 nos. of Mechanical Bypass <p>Basic Training Devices</p> <p>1. Dimming Actuator Module, 2 Fold</p> <ul style="list-style-type: none"> Operating voltage over bus: 21-32V Control voltage: 230V Electronic transformer: 400W per channel Operating temperature: - 5 ~ 45 °C Output Channel: 2 nos. <p>2. Shutter Actuator Module, 4 Fold</p> <ul style="list-style-type: none"> Operating voltage over bus: 21-32Vdc Auxiliary voltage: 230V Capacity load: 6A 		

	<ul style="list-style-type: none"> ● Manual operation button : 4 nos. of bypass button <p>3. Push Button Module, 4 Gang</p> <ul style="list-style-type: none"> ● Operating voltage: 21-32V ● Operating temperature: - 5 ~ 45 °C ● Operation : Programmable button 4/8 <p>4. Push Button Module, 2 Gang</p> <ul style="list-style-type: none"> ● Operating voltage: 21-32V ● Operating temperature: - 5 ~ 45 °C ● Operation : Programmable button 2/4 <p>5. USB Module 1</p> <ul style="list-style-type: none"> ● Operating voltage: 21-32V ● USB Interface : USB 2.0, Type B ● Programming Cable 1.5 Meter <p>6. Presence Sensor Module</p> <ul style="list-style-type: none"> ● Operating voltage: 21-32V ● Operating temperature: - 10 ~ 45 °C ● Sensing capability: Motion sensor (PIR) + Microwave ● Detection Range: 6 meters at 2.8m ceiling height <p>7. Programming Software License & accessories</p> <ul style="list-style-type: none"> ● 1 no. of ETS Lite License with dongle key for programming software license for 20 devices programming. ● 1 no. of programming cable (1.5 meter) 		
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Other Requirements	<p>Supplying, installation and testing of the equipment on site. One set of each accessory for maintenance purpose Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


53. Electrical testing trainer board bench type

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Technical Specification 1. Electrical Protection <ul style="list-style-type: none"> • Short-Circuit Protection: Auto power-off on unintended phase contact. 		

	<ul style="list-style-type: none"> ● Overload Protection: Cuts power when exceeding rated load to prevent overheating. ● Leakage Protection: Shuts off power if leakage current exceeds the safe limit. ● Grounding Protection: Secure grounding for electrical enclosures to prevent shocks. ● Safe Wiring & Sockets: Fully enclosed, insulated structure for user safety. <p>2. Structural Design</p> <ul style="list-style-type: none"> ● Intuitive Display: Open installation for better visualization and understanding. ● Modular & Agile: Two-floor aluminum alloy structure for flexible use. ● Expandable: Easily modified for various teaching and training needs. <p>3. Training & Applications</p> <ul style="list-style-type: none"> ● Industry-aligned training in building automation and intelligent systems. ● Supports hands-on projects, experiments, and engineering research. ● Suitable for higher education and vocational training programs. 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> ● Operation/Maintenance manual in English. ● Warranty certificate: Minimum one year warranty from the date of acceptance of item. ● Any other relevant documents (if any). 		


54. Electrical fundamental training board bench type

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	DLWD-DGJS12 equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> ■ Technology parameter <ul style="list-style-type: none"> ● Input power: Three-phase five-wire 380V \pm 10% 50Hz ● Output power: AC 0-450V, AC0-220V safety terminal output, AC220V output socket security DC 1.25-30V multi- groups DC power security terminal output ● Working environment: temperature -10° C ~ + 40 C Relative humidity <85% (25 C) Altitude <4000m ● System capacity: <1.5kVA ■ Training Project <ul style="list-style-type: none"> ● Basic electrotechnics instrumentation use and measurement error calculation ● The measurement of potential, voltage and drawing of circuit, potential ● Kirchhoff's law verification ● Thevenin theorem verification ● Norton Theorem verification ● The experiment researching of controlled source VCCS, VCVS, C CVS, CCCS ● R, L, C component impedance characteristic test ● The testing of single-phase core transformer features ● Three-phase AC circuit voltage, current measuring ● Three-phase asynchronous motor contactor inching control circuit ● Y- Δ start automatic control circuit ● Multi control of three phase asynchronous motor ● The basic parameters test of the integrated operational amplifier ● Integrated addition circuit ● Waveform generating circuit 		

			
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

55. Digital LCR meter


Features	Required	Complied	Bidder's specifications (Please attach the original brochures)
		(Yes/No)	
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Inductance : 20 μH, 200 μH, 2000.0 μH, 20.0000 mH, 200.00 mH \pm(0.5% rdg + 5 digits); 2000.0 mH, 20.000 H, 200.00 H, 2000.0H (DF <0.1)</p> <p>Capacitance : 20 pF, 200 pF, 2000 pF, 20.000 nF, 200.00 nF, 2000.0 nF \pm(0.5% rdg + 5 digits); 20.000 μF, 200.00 μF, 2.0000 mF, 20.00 mF (DF <0.1)</p> <p>Resistance : 20.00 Ω, 200.00 Ω, 2.0000 kΩ, 20.000 kΩ, 200.00 kΩ, 2.0000 MΩ, 20.000 MΩ, 200.0 MΩ \pm(0.5% rdg + 5 digits)</p> <p>Test Frequency : 100 Hz, 120 Hz, 1 kHz, 10 kHz, 100 kHz</p>		

	<p>Power : 9 V alkaline battery (included) Accessories : Test leads (2), alligator clips (2), protective holder</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

56. Digital wattmeter

Features	Required	Compl ied	Bidder's specificati ons
		(Yes/N o)	(Please attach the original brochures)
Make and Model			
Country of Origin			

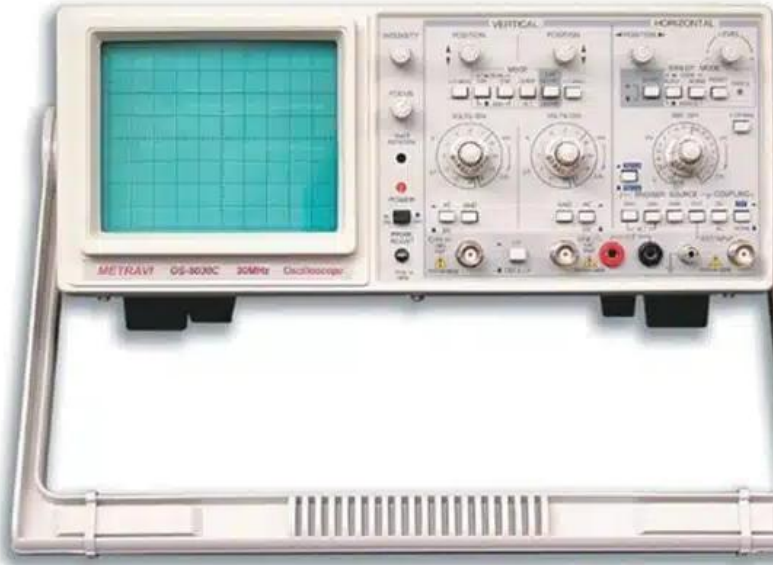
Technical Specification and Minimum Requirements	Accuracy		0.5S
	Data Update Rate		1s
	Signal Input	Rated Current	AC 1A,5A
		Rated Voltage	AC 230V,415V
		Overload	Continuous:2In,instantaneous:10In/5s
			Continuous:1.2Un,instantaneous:2Un/1min
		Energy Consumption	≤0.1VA
		Frequency	45~65HZ
	Communication	RS485 Interface	Modbus-RTU protocol, baud rate up to 9600bps
	Energy Pulse		Optocoupler isolation ,pulse width 80ms±20%
	Digital Input		Optocoupler isolation ,passive dry contact
	Relay Output		Contact capacity AC250V 5A or DC 30V 5A
	Auxiliary Power Supply	Working Range	AC/DC 80~270V
		Energy Consumption	≤5VA
	Environment Condition	Working Temperature	-10~55°C
		Storage Temperature	-25~70°C
		Relative Humidity	≤93%RH
		Altitude	≤2000m
	Safety	Insulation	Signal, power supply, output terminal to case resistance ≥100MΩ
		Withstand Voltage	Power supply, input and output ≥2kv

	Protection Level	IP54		
				
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 			

57. Cathode Ray Oscilloscope

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> • Dual Trace Dual Channel Oscilloscope with Component Test Facility • Bandwidth: 30MHz • Full bandwidth sweeping circuit is used in the sweeping system 		

	<ul style="list-style-type: none"> • The flexible and convenient triggering mode has the functions for selecting signals from one channel or triggered by Ext signals • ALT trigger to observe signals from two irrelative channels • The instrument has the functions of TV-H / TV-V synchronization and trigger-lock to observe all kinds of signals stably • From the terminal for trigger input, CH1 and CH2 signals can be output along with the triggering channel to connect the Ext frequency counter • Y deflection operation: Y1, Y2, ALT, CHOP, ADD, mode X-Y • Vertical Deflection: 5mV/Div to 20V/Div in factor 1-2-5 sequence in 12 steps • Rising time: < 18nS • Maximum Input Voltage: 400V (DC +ACp-p) • Triggering Source: Y1, Y2, ALT, POWER, EXT • Trigger Coupling: AC/DC (EXT), NORM/TV-H, TV-V • Horizontal Sweep Mode: AUTO, TRIG, LOCK, SINGLE • Sweep time factor: 0.1uS/div to 0.2s/div in 1-2-5 sequence in 20 steps • Magnification: x10 • X-Y Mode input: X-Axis Y1 and Y-Axis Y2 • Z Axis minimum input level: TTL Level • Component Test Facility • Calibration Signal: Square wave of 0.5V at 1kHz • CTR Display size: 8cm x 10cm • Accessories: Power cord and connecting probes (male BNC to alligator clip ground lid with retractable hook tip with IC protector tip) 4 nos. 		
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Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

58. Standby generator set

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	DB-50GF equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>General Specifications</p> <ul style="list-style-type: none"> • Type: Open type • Prime Power: 50KW / 62.5KVA • Standby Power: 55KW / 68.75KVA • Rated Voltage: 400V/230V • Rated Frequency/Speed: 50Hz / 1500RPM • Power Factor: 0.8 lag 		

	<ul style="list-style-type: none"> ● Phase: 3-phase, 4-wire ● Noise Level: <ul style="list-style-type: none"> ○ Open type: 100dB at 7m ● Dimensions (L × W × H): <ul style="list-style-type: none"> ○ Open type: 1860 × 760 × 1300mm ● Weight: <ul style="list-style-type: none"> ○ Open type: 900kg <p>2. Engine Specifications</p> <ul style="list-style-type: none"> ● Engine Model: 4BTA3.9-G2 ● Prime Power: 36kW ● Standby Power: 40kW ● Cylinders: 4, Vertical in-line, 4-stroke ● Aspiration: Turbocharged, aftercooled ● Cooling Method: Water-cooled ● Displacement: 3.9L ● Compression Ratio: 17.3:1 ● Governor Type: Electronic ● Bore × Stroke: 102mm × 120mm ● Starting System: Electric Start (24V DC Starter Motor) ● Fuel Injection System: Direct Injection ● Lubrication Capacity: 10.9L ● Maximum Oil Temperature: 125°C ● Coolant Capacity: 8.3L <p>3. Alternator Specifications</p> <ul style="list-style-type: none"> ● Continuous Rated Power: 50KW / 62.5KVA ● Rated Voltage: 415V/230V ● Frequency/Speed: 50Hz / 1500RPM ● Phase: 3-phase, 4-wire ● Efficiency: 94.7% ● Excitation Type: Brushless Excitation ● Regulator: Automatic Voltage Regulator (AVR) ● Short Circuit Current Capacity: >300IN for 10s (with PMG or Auxiliary Winding) ● Voltage Regulation: ± 1.0% ● Waveform Distortion: <ul style="list-style-type: none"> ○ TIF: <50 ○ THD: <3% ○ THF: <2% ● Winding Pitch: 2/3 ● Protection Class: IP22 or IP23 ● Insulation Class: H ● Duty Cycle: Continuous ● Number of Poles: 4 		
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	<ul style="list-style-type: none"> • Maximum Overspeed: 2250 RPM for 2 minutes • Altitude Limit: $\leq 1000\text{m}$ • Overload Capacity: 110% rated load for 2 hours per 24-hour period <p>4. Control System</p> <p>Standard Controller</p> <ul style="list-style-type: none"> • Model: Deep Sea 7320 or SmartGen 6110 equivalent • Features: <ul style="list-style-type: none"> ○ LCD display with multilingual support (English, Chinese, Spanish, Russian, etc.) ○ Automatic start/stop function ○ Data measurement and monitoring ○ Alarm protection system ○ Remote control, measurement, and communication <p>5. Electrical & Protection System</p> <ul style="list-style-type: none"> • Breaker Type: <ul style="list-style-type: none"> ○ Standard: Chint Breaker ○ Optional: ABB or Schneider Breaker • Protection Features: <ul style="list-style-type: none"> ○ Overload protection ○ Short circuit protection ○ Under/over-voltage protection ○ Over-frequency/under-frequency protection ○ Oil pressure and temperature monitoring <p>6. Fuel System</p> <ul style="list-style-type: none"> • Fuel Tank Capacity: <ul style="list-style-type: none"> ○ 8/12-hour base bottom fuel tank • Fuel Type: Start petrol, Run diesel <p>7. Additional Features</p> <ul style="list-style-type: none"> • Anti-Vibration Mounted System • Battery & Connecting Cables • Battery Charger • Industrial Silencer & Flexible Exhaust Hose 		
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Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

59. Grid tied solar panel system trainer board

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	PL-621654 equivalent/ Higher		
Country of Origin			
Technical Specifications and Minimum Requirements	<p>1. General Description</p> <ul style="list-style-type: none"> • Modular training system for theoretical and practical study of photovoltaic (PV) energy generation. • Supports experiments on solar panel characteristics, on-grid operation, and grid-tie battery storage. • Includes a sun simulation module for indoor use. <p>2. Solar Panel & Simulation</p> <ul style="list-style-type: none"> • Solar Panel: <ul style="list-style-type: none"> ○ Power: 90W 		






	<ul style="list-style-type: none"> ○ Voltage: 12V ○ Adjustable inclination & azimuth ○ Integrated solar irradiation and temperature sensor ● Sun Simulator: <ul style="list-style-type: none"> ○ Uses halogen lamps for indoor photovoltaic testing <p>3. Measurement & Monitoring</p> <ul style="list-style-type: none"> ● Multifunction Measurement Module: <ul style="list-style-type: none"> ○ Solar irradiation: up to 1000 W/m² ○ Solar panel temperature: up to 400°C ○ DC power meters: 65Vdc, 30Adc, 1000W ○ AC power meter: 512Vac, 30Aac, 1000W ● Three-Phase Power Analyzer: <ul style="list-style-type: none"> ○ Measures voltages, currents, frequencies, active, reactive, and apparent power <p>4. Load Management & Inverter</p> <ul style="list-style-type: none"> ● Load Management Module: <ul style="list-style-type: none"> ○ Three independent single-phase outputs for dynamic load study ● Active DC Load: <ul style="list-style-type: none"> ○ Configurable as constant resistance or constant current ● Grid-Tie Inverter: <ul style="list-style-type: none"> ○ 12V, 300W output at mains voltage <p>5. Power Supply & Energy Storage</p> <ul style="list-style-type: none"> ● Inverter Charger Module: <ul style="list-style-type: none"> ○ Manages battery storage, solar & utility charging, and AC output ○ Four charging modes: <ul style="list-style-type: none"> ▪ Solar Priority ▪ Utility Priority ▪ Solar & Utility ▪ Combined Solar & Utility ○ Two output modes: Battery & Utility ○ Uses MPPT (Maximum Power Point Tracking) technology ○ Protection against overcurrent and reverse polarity ● Single-Phase Transformer: <ul style="list-style-type: none"> ○ Full-wave rectifier and capacitive filter for DC load power ● Variable DC Power Supply: <ul style="list-style-type: none"> ○ Simulates a photovoltaic panel 		
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	<ul style="list-style-type: none"> ○ V/I characteristic varies with irradiation setting ○ Local/remote control via Modbus RTU <p>6. Software & Communication</p> <ul style="list-style-type: none"> ● Control & Data Acquisition Software: <ul style="list-style-type: none"> ○ Developed in LabVIEW ○ Communicates via RS485 using Modbus RTU protocol ○ Performs real-time data acquisition and processing <p>7. Safety & Protection</p> <ul style="list-style-type: none"> ● Key-operated single-phase output (Phase + Neutral + Ground) ● Protected with differential magneto-thermal switch <p>8. Structural Features</p> <ul style="list-style-type: none"> ● Three-Level Frame Design for system integration and modular expansion 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> ● Operation/Maintenance manual in English. ● Warranty certificate: Minimum one year warranty from the date of acceptance of item. ● Any other relevant documents (if any). 		






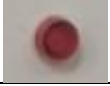


60. Split Air Conditioner Training system board

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the

			original brochures)			
Make and Model	DLZL-AC01 equivalent/ Higher					
Country of Origin						
Technical Specification and Minimum Requirements	No	Reference Photo	Name	Spec	Qty	Remark
	1		outdoor condenser	Power: Single phase 220V ± 10% Capacity : 9000btu/h	1	Frequency conversion type
	2		Wall-mounted evaporator	Power: Single phase 220V ± 10% Capacity : 9000btu/h Noise : 35dB	1	Including temperature controller
	3		low pressure gauge	Pressure range: 0~3.5Mpa	1	
	4		High pressure gauge	Pressure range: 0~5.5Mpa	1	
	5		High pressure controller Low pressure controller	Connect way: Flare thread connection Connect line	1	


				diameter : $\Phi 6$				
	6		Sight glass	Welded type Connect pipe diameter : $\Phi 6$	1			
	7		Manual valve	Connect way: Flare thread connection Connect line diameter : $\Phi 6$	2			
	8		Digital temperature display and temperature sensing head	Power : single phase 220V \pm 10% Temperature display scope : - 50°C~+110°C ; Accuracy : $\pm 0.5^\circ\text{C}$ Display resolution : 0.1°C ; Sensor : NTC , Sheathed wire	4			

	9		Leakage circuit protector	Power: Single phase 220V \pm 10% Current: 16A	1			
	10		Pointer voltmeter	0~250v	1			
	11		Pointer ammeter	0~10A	1			
	12		Key switch	Self-lock type	1			
	13		Emergency stop button	Self-lock type	1			
	14		Over load protector	10A	1			
	15		Indicator		5			
	16		Bench					
	17		Manual		1			


			
Other Requirements	<p>Supplying, installation and testing of the equipment on site. One set of each accessory for maintenance purpose Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

61. Core drill

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			


Country of Origin	
<p>Technical Specification and Minimum Requirements</p>	<p>Aluminum drill stand Application: Can be used handheld or with a stand. Precision Drilling: Smooth sliding guide with laser pointer for alignment. Secure Fixing: Combination base for anchor or vacuum mounting. Angle Drilling: Adjustable up to 45°. User-Friendly: Suitable for both left- and right-handed users. Complete Kit: Includes tools and fastening accessories. Voltage rating: 230V, 50-60 Hz Power rating: 2200 W RPM: 1400 to 2900 min-1</p> <p>Drill bit specification</p> <ul style="list-style-type: none"> • Outside Bit Diameter: 1", 2", 3", 4", 5" & 6" • Overall Length: 17" Approximate • Inside Barrel Depth: 14.5" Approximate • Thread Type: Industry Standard 1 1/4" 
<p>Other Requirements</p>	<p>Supplying and testing of the equipment on site. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any).

62. Hydrostatic Test pump


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Working Pressure: 0-50 Bar (0-726 PSI) Flow Volume: 16 mL per stroke Tank Volume: 2.0 gallons Outlet Connection: 1/4" x 76" hose with 1/4" male to 1/2" male fittings Construction Materials:</p> <ul style="list-style-type: none"> Pump Body: Copper Water Tank: Stainless steel with a circular arc design <p>Pressure Gauge: Large, clear, glycerin-filled for accurate readings Handle Design: Ergonomic foam grip for comfortable operation Pressure Locking Mechanism: Supports both automatic and manual pressure locking methods Applications: Suitable for hydraulic testing in water pipe systems, heating and oil installations, and air-conditioning systems</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. 		

	<ul style="list-style-type: none"> Any other relevant documents (if any). 		
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63. Drain cleaning machine


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Power source: 230V, 50Hz Type: High pressure Size: 65L x 40W x 60H cm Pressure: 220bar Power rating: 2200 watt Flow rate: 10L/min Motor rating: 3HP Engine speed: 1400 RPM C/w 50.0m length flexible rod and forward & spinning drain cleaning jet nozzles</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		

64. Kinetic water-ram

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p> Cable Length: 21' Material: Steel Length: 21 in Width: 4-1/4 in Height: 6-1/2 in Weight: 9 lbs For Use with Pipe Size: 1-1/4 to 4 in Max Cable Length: 21 ft Includes: 4 Rubber Cones, 5 Plugs, Closet Attachment, Caulking Hose, & Case </p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


65. Auger

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Type: Drum type Size: 12.09 x 10.43 x 7.13 inches (cable 50ft) Cable Length: 25-FT Plumbing Snake with Drill Attachment Cable Diameter: 3/8" Compatible Pipe Sizes: 1-1/4 inch to 2 inches in diameter Cable Material: Steel Drum Housing Material: High-impact polymer Included Accessories: Work gloves and storage bag</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

66. Pipe bending spring

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the

			original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Type: Internal Size: 1 to 5m Dia: 15mm, 20mm, 32mm and 40mm</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


67. Electrofusion machine

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum	<p>Type: HDPE tube welding Design and according to ISO12176 electro-fusion welder international standard.</p>		

Requirements	<p>2.High lever MCU is used as control core, equipped with LCD display, all welding parameters could be displayed.</p> <p>3.Light weight, easy operation.</p> <p>4.By real-time monitoring weld status, abnormal welding process could be terminated in short time.</p> <p>5.Built in memory, can record more than 500 welding records.</p> <p>6.Welding wiring is easy and simple to avoid wiring error.</p> <p>7.Welding parameters input modes:(1) Manually Set;(2) Read in by bar code scanner.</p>		
			
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

68. Instantaneous water heater

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

<p>Technical Specification and Minimum Requirements</p>	<p>Power: 1 kW, 2 kW & 3 kW settings C/w approved 15A 3-pin plug, inlet screwdown type control valve, flexible hose, shower head and sliding rod type shower head bracket 5-Function Shower Head Stepless Electronic Control Temperature Regulator Ingress Protection (IP25) Water Proofing Casing Constant Temperature Function Power Usage: 3.3kW</p> 		
<p>Other Requirements</p>	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


69. Water leakage detector (indoor-Outdoor)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

Technical Specification and Minimum Requirements	<p>Detection range: 5 m</p> <p>Sensors: Sensor Middle +Triangular +Square</p> <p>Frequency Range: 1–10,000 Hz</p> <p>Gain: 10 levels adjustable</p> <p>Volume: 10 levels adjustable</p> <p>Operating Modes: General Detection and Locating Mode</p> <p>Display: 7-inch HD digital touch LCD screen</p> <p>Charting Time: 7–8 hours</p> <p>Working Time: Up to 15 hours</p> <p>Input Power: Approximately 2W</p> <p>Working Temperature: -20°C to +50°C</p> <p>Strap Buckle: For securing the device</p> <p>USB Charge Interface (5V): Charging & PC connection</p> <p>SD Card Slot: System upgrades</p> <p>Five-Core Air Plug: Sensor connection</p> <p>USB Interface: Expansion use</p> <p>Headphone Jack: Audio output</p> <p>Reset Button: System reset/shutdown</p> <p>Microphone: For voice recording</p> <p>Indicator: Power & charging status</p> <p>Switch Button: Power on/off</p> <p>Right Knob: Volume control & mute (press)</p> <p>Left Knob: Gain control & mute (press)</p>		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		




70. Reamer

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Material: Hardened Stainless Steel Color: Copper Size: Small Capacity:</p> <ul style="list-style-type: none"> Outer diameters: 1/4 inch to 2 inches <p>Dimensions: 4.57 x 12.45 x 21.34 cm Cutting Edges:</p> <ul style="list-style-type: none"> 45 cutting edges on the interior cone for fast and clean inner reaming and outer deburring <p>Measurement System:</p> <ul style="list-style-type: none"> Dual imperial (inch) and metric measurement bar for easy adjustments <p>Included Components: Tubing and Pipe Reamer Ergonomic Features:</p> <ul style="list-style-type: none"> Knurled edges for a superior grip during reaming Durable construction for heavy-duty and daily use 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p>		


	<ul style="list-style-type: none"> • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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71. Snake Drum Auger

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Drum Auger, 35-Foot Plumbing Drill Adapter Snake Clog Remover for Bathtub Drain, Shower and Kitchen Sink</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


72. Pipe cutter

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>1. Ideal for cutting plastic pipes and pipes CPVC, PE, PEX, PPR</p> <p>2. Safety lock at the end for easy storage, prevents accidental injury when not in use.</p> <p>3. Cutting capacity: up to 42 mm outer diameter.</p> <p>4. Replaceable blade</p> <p>5. Non-slip grip</p> <p>6. Safety lock on the tail</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


73. Wireless Security Camera System

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin	<p>Supplying, installation and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
Technical Specification and Minimum Requirements	<p>1080P Wireless Security Camera System, 8CH Wireless NVR System with 8 pcs 1080P HD Security Camera and 3TB Hard Drive Pre-Installed, CCTV P2P for Indoor Outdoor for Home and Connectivity technology: Wi-Fi Video Capture resolution:3MP Special Feature: Night vision, Motion Sensor Number of Channel:8 Camera: 8 Nos (wireless) NVR: 8 Channel</p> 		
Other Requirements			

74. Burglar alarm

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Home Burglar Alarm System 23 pcs kit Wireless DIY GSM Auto Dialer for House Security Size: 24pcs 2G Alarm System Color 24 pcs 2G Alarm System Power source: Battery Powered Compatible Devices: Smart Phone Item Dimension LxWxH: 10.5x6.2x7i WITH Sensor: 5 nos, remote: 4 nos, Wireless DIY GSM Auto Dialer for House Security, wireless remote : 12 nos with door sensors and 1 Hooter</p> 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


75. Crimping tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Pass Through RJ45 Connector type: Cat7 Cat6 Cat5 Crimping Tool with Network Cable Tester, 50-Pack Cat6 RJ45 Pass Through Connector, 50-Pack Connector Boots</p> 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


76. Stand Alone Solar PV System Training Station

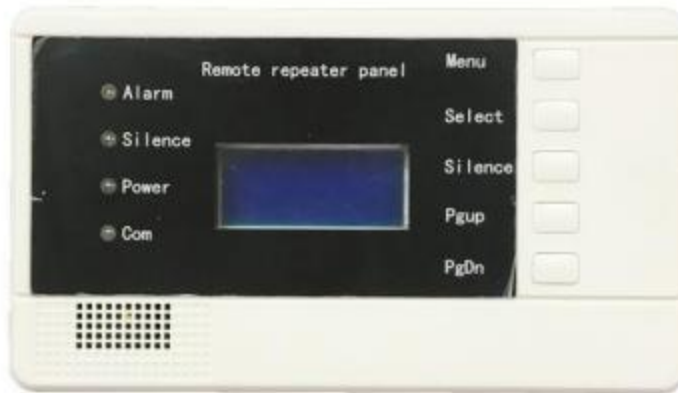
Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)

Make and Model	TB-230223-V-028 equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>Mobile Workstation Dimensions:</p> <ul style="list-style-type: none"> Length: 72 inches (183 cm) Height: 72 inches (163 cm) Width: 34 inches (86 cm) <p>This workstation consists of Panel Set A for wiring and Panel Set B for PV array connection and lighting.</p> <p>Panel Set A (Wiring & Off-Grid PV System Components)</p> <p>1.1 Mobile Workstation Features:</p> <ul style="list-style-type: none"> Equipped with four swivel casters, two of which are lockable for stability and mobility. The Balance of System Components is pre-installed within trunking and ducting to streamline the routing and wiring of cables. <p>Pre-mounted components for off-grid PV system:</p> <ul style="list-style-type: none"> DC Array Isolator with MC4 connectors, pre-terminated for external solar cable connections to the PV array. 2 sets of MCBs for overcurrent protection of the DC array and controller. Charge Controller with provisions for battery charging, DC external loads, and inverter connection. Displays voltage and current readings. Battery Disconnect Switch for safe battery isolation. 12V, 100AH Deep Cycle Lead Acid Battery for energy storage. AC Inverter: Input 12V to 24V, Output 230V, 50Hz. AC Isolator to disconnect AC power. AC Consumer Unit, including: <ul style="list-style-type: none"> Double Pole MCB Isolator, Residual Current Breaker (RCB), Surge Protection Device (SPD), 10A, 20A, and 20A MCBs for load protection. Earthing Terminations provided for both DC and AC connections. Panel Set B (PV Array & Flood Lighting Assembly) <p>2.1 Flood Lighting Lamp Assembly:</p> <ul style="list-style-type: none"> Four lamps mounted on anodized, non-corrosive swivel supports, two on each side of the mobile board and controlled independently. 		

	<ul style="list-style-type: none"> • 2.2 PV Array Specifications: • PV Modules: <ul style="list-style-type: none"> ○ Number of Modules: Four Polycrystalline PV modules. ○ Power Rating per Module: 375W. ○ Voltage (Vmp): 18V. ○ Short-Circuit Current (Isc): 18A. ○ Open-Circuit Voltage (Voc): 21.2V. • Module Connections: <ul style="list-style-type: none"> ○ Positive and negative terminals are terminated in MC4 connectors, properly labeled for easy identification. ○ Parallel MC4 connectors with solar wiring assemblies are included to allow series or parallel connections of the four modules. • Mounting System: <ul style="list-style-type: none"> ○ Modules are mounted on an inclinable plane with locking positions at 0°, 15°, 30°, 45°, 60°, 75°, and 90° relative to the horizontal. 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

77. Fire alarm linkage system training board bench type

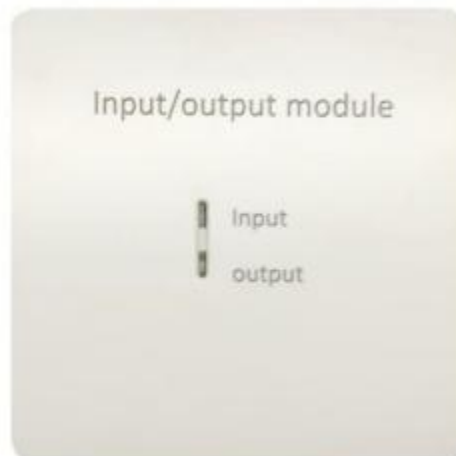
Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	DLLY-XF1 equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>Technical Parameters</p> <ul style="list-style-type: none"> Power Supply: AC 220V \pm10%, 50Hz Environment: -10°C to +55°C, humidity <85% Dimensions: 1668mm \times 805mm \times 1484mm <p>Basic Configuration</p> <ol style="list-style-type: none"> Power Module – Provides AC power with over-current, leakage, and grounding protection. Training Platform – Fireproof, wear-resistant, and mobile training table with storage. 		
	 <p>0. Fire Alarm Controller – Touchscreen LCD, 90-270VAC, expandable up to 6 loops (254 points/loop).</p>		



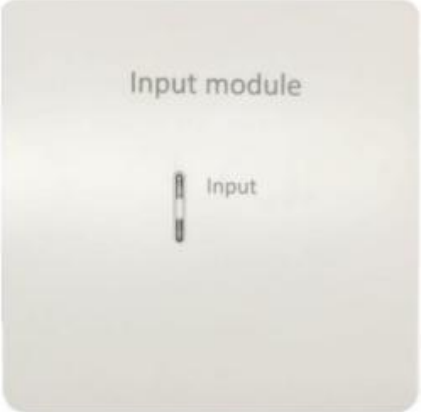


0. Addressable Repeater Panel – Displays multi-floor or zoned fire alarms.



0. Addressable Detectors – Includes smoke and heat detectors.

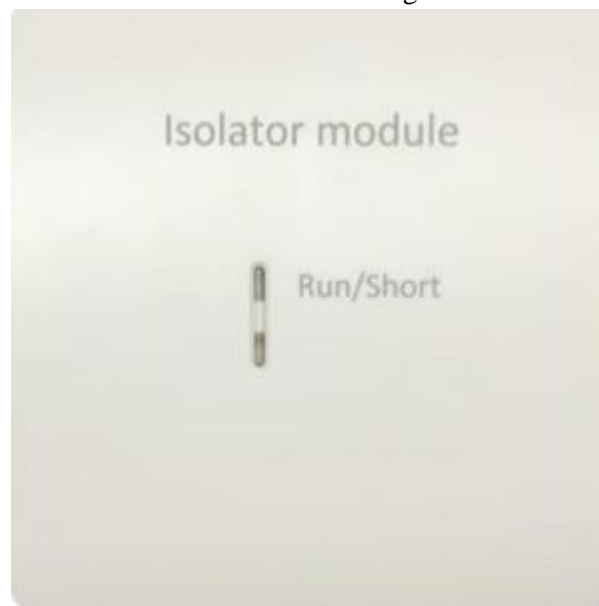


0. Input & Output Modules – Controls alarm bells and links signals to the controller.

	<div data-bbox="444 195 862 604">A white rectangular device with the text "Input module" at the top and a small vertical slot labeled "Input" in the center.</div> <div data-bbox="479 604 1128 682"><p>0. Addressable Input Module – Monitors fire linkage equipment signals.</p></div> <div data-bbox="453 693 857 1125">A red rectangular device with a white house icon with a flame at the top. Below it is a light blue panel with "Tel" and "Alarm" indicators, a central black circle with arrows pointing left and right, and the text "PRESS HERE".</div> <div data-bbox="479 1125 1120 1203"><p>0. Manual Alarm Button – Sends alarm signal when pressed.</p></div> <div data-bbox="457 1213 959 1745">A red rectangular device with the word "FIRE" in large white letters at the top. Below it is a clear plastic cover over a speaker and a light source.</div> <div data-bbox="479 1745 1140 1829"><p>0. Sound & Light Alarm – Alerts personnel in case of fire.</p></div>		
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0. Electronic Encoder – Programs addressable devices.



0. Isolator Module – Protects loop circuits by isolating shorted sections.

Training Content

- System equipment knowledge and wiring operation
- Installation, connection and use of fire display panel
- Installation and connection of various fire detectors
- Installation and connection of input and output modules, sound and light alarms, and alarm buttons
- Component address coding setting
- System management operations
- System data query operation


	<ul style="list-style-type: none"> • Equipment start and stop operation • Linkage programming • Judgment and treatment of line faults • Design and install a simple application system <table border="1"> <thead> <tr> <th>N O.</th><th>Name</th><th>Q ty</th><th>Unit</th></tr> </thead> <tbody> <tr> <td>1</td><td>Training platform</td><td>1</td><td>PC</td></tr> <tr> <td>2</td><td>Power Module</td><td>1</td><td>PC</td></tr> <tr> <td>3</td><td>Fire alarm controller (linkage type)</td><td>1</td><td>PC</td></tr> <tr> <td>4</td><td>Fire display panel (LCD display)</td><td>1</td><td>PC</td></tr> <tr> <td>5</td><td>Addressable smoke detectors</td><td>2</td><td>PC</td></tr> <tr> <td>6</td><td>Addressable heat detector</td><td>2</td><td>PC</td></tr> <tr> <td>7</td><td>Addressable Input Modules</td><td>1</td><td>PC</td></tr> <tr> <td>8</td><td>Input and output control module</td><td>1</td><td>PC</td></tr> <tr> <td>9</td><td>Manual fire alarm button</td><td>2</td><td>PC</td></tr> <tr> <td>10</td><td>Sound and light alarm</td><td>1</td><td>PC</td></tr> <tr> <td>11</td><td>Alarm Bell</td><td>1</td><td>PC</td></tr> <tr> <td>12</td><td>Handheld encoder</td><td>1</td><td>PC</td></tr> <tr> <td>13</td><td>Isolator Module</td><td>1</td><td>PC</td></tr> </tbody> </table> 	N O.	Name	Q ty	Unit	1	Training platform	1	PC	2	Power Module	1	PC	3	Fire alarm controller (linkage type)	1	PC	4	Fire display panel (LCD display)	1	PC	5	Addressable smoke detectors	2	PC	6	Addressable heat detector	2	PC	7	Addressable Input Modules	1	PC	8	Input and output control module	1	PC	9	Manual fire alarm button	2	PC	10	Sound and light alarm	1	PC	11	Alarm Bell	1	PC	12	Handheld encoder	1	PC	13	Isolator Module	1	PC		
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78. Constant Pressure Water Supply Training board bench type

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	DLLY-HYGS462 equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>Training Projects</p> <ol style="list-style-type: none"> 1. PLC programming method and application 2. Understanding and application of smart instruments 3. Understanding and application of frequency converter 4. Understanding and application of pressure sensors 5. Understanding and application of pressure instruments 6. Knowledge and application of water pumps 7. Understanding and application of dormant water pumps 8. Understanding and application of fire pumps 9. Understanding and application of flow velocity sensors 10. Understanding and application of constant pressure water <p>Technical parameters</p> <ol style="list-style-type: none"> 1. Input power: three-phase five-wire AC380±10% 50Hz ±10% 2. Control power supply: Operation power supply: DC24V 3A 3. Ambient temperature: 0 °C ~ 40 °C , ambient humidity: ≤90% (25 °C) 4. Machine capacity: ≤5 kW 5. Occupied PLC I/O points <ul style="list-style-type: none"> • Number of switch input points: 17 • Number of switch output points: 12 • Analog input points: 2 channels (current type/voltage type) • Analog input points: 1 channel (current type/voltage type) 		


Name	Description	Qty
Control Panel	Aluminum plastic plate	1 set
PLC host module	FX3U Series Host	1 set
PLC expansion modules	FX3U series analog expansion	1 set
Button	LAY50	1 set
Indicator Lights	DC24V	3 sets
AC contactor	CJ2X0910	6 sets
Thermal relay	Matching with AC contactor	4 sets
Switching Power Supply	DC24V	1 set
Frequency Converter	D700 Series	1 set
Magnetic drive pump	AC220V	4 sets
Pressure transmitter	National Excellence	1 set
Pressure Instruments	DC24V	1 set
Flow rate sensor	Pulse	6 sets
Download line	PLC download line	1 set
Test line	K3/K4	50 set
Operation panel	Various lead terminals, DC24V power supply, pressure sensor, pressure instrument, PLC, inverter, intelligent instrument and rocker switch	1 set
Water tank	Acrylic water tank	2 sets
Floor water tank	Acrylic water tank	6 sets
Water tank	Acrylic	1 set
One-way stop valve	DN20	4 sets
Angle valve	DN20	18 sets

	<table><tr><td>Buffer device</td><td>National Excellence</td><td>2 sets</td></tr><tr><td>Valve</td><td>DC24V</td><td>1 set</td></tr><tr><td>Pipeline</td><td>DN20</td><td>1 set</td></tr></table>	Buffer device	National Excellence	2 sets	Valve	DC24V	1 set	Pipeline	DN20	1 set		
Buffer device	National Excellence	2 sets										
Valve	DC24V	1 set										
Pipeline	DN20	1 set										
	<p>Additional accessories</p> <ul style="list-style-type: none">● Host computer software: 1 set● Touch screen: 1 set● Computer desk: 1 set 											
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none">● Operation/Maintenance manual in English.● Warranty certificate: Minimum one year warranty from the date of acceptance of item.● Any other relevant documents (if any).											

79. Water Supply and Drainage Pipeline Installation Training Equipment/board


Features	Required	Complied	Bidder's specification s																																																								
		(Yes/No)	(Please attach the original brochures)																																																								
Make and Model	DLPH-810A equivalent/ Higher																																																										
Country of Origin																																																											
Technical Specification and Minimum Requirements	<table><tr><th>No.</th><th>Product Name</th><th>Specifications</th><th>Qty</th><th>Unit</th></tr><tr><td>1.</td><td>Training platform</td><td>1600 (length)* 1000 (width)* 2400 (height)</td><td>nos.</td><td>1</td></tr><tr><td>2.</td><td>Pressure transmitter</td><td>6 points, RS485</td><td>Item</td><td>1</td></tr><tr><td>3.</td><td>Household meter water distributor</td><td></td><td>set</td><td>1</td></tr><tr><td>4.</td><td>Valve accessories</td><td>6 points</td><td>set</td><td>1</td></tr><tr><td>5.</td><td>PEX pipe</td><td>6 points</td><td>rice</td><td>50</td></tr><tr><td>6.</td><td>Drain</td><td>110, 75, 50</td><td>set</td><td>1</td></tr><tr><td>7.</td><td>Transparent PVC tube</td><td>25</td><td>rice</td><td>20</td></tr><tr><td>8.</td><td>Mop pool</td><td></td><td>Item</td><td>1</td></tr><tr><td>9.</td><td>Freestanding urinal</td><td>Ground type</td><td>set</td><td>1</td></tr><tr><td>10.</td><td>Squat Toilet</td><td>No bend after drainage</td><td>set</td><td>1</td></tr></table>		No.	Product Name	Specifications	Qty	Unit	1.	Training platform	1600 (length)* 1000 (width)* 2400 (height)	nos.	1	2.	Pressure transmitter	6 points, RS485	Item	1	3.	Household meter water distributor		set	1	4.	Valve accessories	6 points	set	1	5.	PEX pipe	6 points	rice	50	6.	Drain	110, 75, 50	set	1	7.	Transparent PVC tube	25	rice	20	8.	Mop pool		Item	1	9.	Freestanding urinal	Ground type	set	1	10.	Squat Toilet	No bend after drainage	set	1		
	No.	Product Name	Specifications	Qty	Unit																																																						
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	8.	Mop pool		Item	1																																																						
	9.	Freestanding urinal	Ground type	set	1																																																						
	10.	Squat Toilet	No bend after drainage	set	1																																																						

	11.	Wash basin		Item	1		
	12.	Water tank		Item	1		
	13.	Frequency conversion water pump		Only	2		
	14.	Faucet		set	1		
	15.	Shower		set	1		
	16.	PLC	Xinjie	Item	1		
	17.	touchscreen	Kunlun Tongtai	Item	1		
	18.	Urinal flush valve		Item	2		
	19.	Mop pool faucet		Item	1		
	20.	Pulse water meter		Only	2		
	21.	Raw tape		plate	5		

			
Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10 years warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


80. Fire detection system programming tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

<p>Technical Specification and Minimum Requirements</p>	<ul style="list-style-type: none"> • Display: 32-character backlit LCD (2 rows of 16 characters) with 4 soft keys. • Power Supply: Operates on standard rechargeable batteries, suitable for both desktop and single-handed operation. • Functionality: <ul style="list-style-type: none"> ○ Read and write detector/ancillary addresses. ○ Display data such as manufacture date, serial number, and commissioning information. ○ Show temperature, CO levels, and smoke obscuration. ○ Program LED indicators. ○ Perform detector self-verification tests. ○ Display detector dirtiness levels. ○ Control and monitor ancillary outputs. • Accessories: Includes alternative straps and a cigarette lighter adapter. • Software: Requires recharging by an authorized administrator after a finite lifetime. <p>This tool is essential for diagnostics and managing Tyco MX Fire Detection systems.</p> 		
<p>Other Requirements</p>	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of at least 5 staffs.</p>		

	<p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10 year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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81. CT meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Connection Type: Three Phase Four Wire Accuracy Class: 0.5S Voltage: 3 x 240V (L-N); Operating range: -40% to +20% Current: <ul style="list-style-type: none"> • /5A; Basic current (I_b): 5A; Maximum current (I_{max}): 10A (Programmable CT Primary value) Power Factor Range: Zero lag - Unity - Zero lead Frequency: 50 Hz ± 5% Starting Current: 0.1% of I_b at V_{ref}, UPF Dimensions (L x W x H): 232 x 192 x 96 mm</p> 		

Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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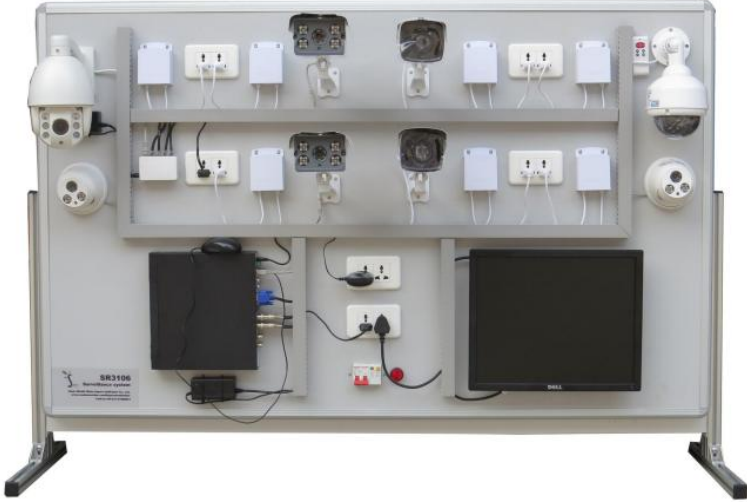
82. Wire terminal crimping tool

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> • Type: Wire Crimping Tool with Wire End Connector • Pack Contents: 1 wire joint connector <p>Features:</p> <ul style="list-style-type: none"> • Self-Adjusting Mechanism: The tool automatically adjusts to the appropriate diameter for stripping terminals, enhancing efficiency and precision. • Ratcheting Function: Ensures a secure crimp with minimal effort, reducing hand fatigue during extended use. • Ergonomic Design: Equipped with comfortable, non-slip handles for improved grip and user comfort. • Comprehensive Kit: Includes 600 wire end connectors, catering to a wide range of crimping needs. <p>Dimensions and Weight:</p> <ul style="list-style-type: none"> • Tool Length: Approximately 175 mm • Weight: Approximately 0.75 kg <p>Material:</p> <ul style="list-style-type: none"> • Crimper Body: High-carbon steel for durability and long-lasting performance. • Handle: TPR (Thermoplastic Rubber) for a comfortable grip. <p>Crimping Capacity:</p> <ul style="list-style-type: none"> • Applicable Wire Sizes: 0.25-10 mm² (AWG 23-7) 		

	<ul style="list-style-type: none"> Suitable Terminals: Insulated and non-insulated wire ferrules. 		
Other Requirements	<p>Supplying and testing of the equipment on site.</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any). 		


83. Surveillance System trainer board bench type

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	SR3106 equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<p>(1) Input power: AC220V / 50Hz (2) External dimensions: 1565 * 400 * 1070mm (3) Unit capacity: < 1KVA (4) Weight: < 50kg (5) Working conditions: temperature - 10 °C ~ + 40 °C relative humidity < 85% (25°C)</p> <p>Product composition</p> <p>1. Power unit: Four-unit power outlet (230V) with 32A MCB</p>		

	<ol style="list-style-type: none"> 2. Camera power supply: Four AC (230V) power outlet and two 12 channel 12VDC SMPS (2 nos.) 3. Desktop set for display 4. 16 channel NVR 5. 8 (1080P) HD IP camera (wired) dome type with night vision 6. 4 (1080P) HD IP camera (wireless) PTZ type with Night vision and Motion Sensor 7. TB Hard Drive Pre-Installed 		
Other Requirements	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. One set of each accessory for maintenance purpose The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum one year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

84. Sprinkler head

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			

Country of Origin	
<p>Technical Specification and Minimum Requirements</p>	<p>Sprinkler Heads</p> <ul style="list-style-type: none"> Types: <ul style="list-style-type: none"> Pendent Sprinkler: 4 Nos K-factor: 115 (8.0) Standard Orifice Size: 15mm (½") Thread Size: ½" NPT; R ½ (½" BSPT) available on special order Response Type: Standard Response Bulb Diameter: 5mm Maximum Working Pressure: 12 bar (175 psi) Minimum Operating Pressure: 0.5 bar (7 psi) Factory Pressure Test: 34 bar (500 psi) Weight: 79 g (2.8 oz) Finishes Available: Brass finish <p>Operating Temperatures and Corresponding Bulb Colors:</p> <ul style="list-style-type: none"> 141°C (286°F): Blue Activation Mechanism: <ul style="list-style-type: none"> Fusible Link <p>Temperature Ratings: 57°C (135°F) to 227°C (440°F), depending on fire risk.</p> 
<p>Other Requirements</p>	<p>Supplying, installation and testing of the equipment on site. Training of at least 5 staffs. The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> Operation/Maintenance manual in English. Warranty certificate: Minimum one year warranty from the date of acceptance of item. Any other relevant documents (if any).

85. Water tank

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Capacity: 2,000 liters Dimensions: Diameter: 1,200 mm; Height: 1,960 mm Outlet: Supplied as standard with a 1.5" outlet Lid: 455 mm diameter Colors Available: Black Material: Manufactured from UV-stabilized polyethylene, ensuring 100% rust-proof performance		
Other Requirements	Supplying and installation of the equipment on site. The following documents & certificates to be provided along with each machine. <ul style="list-style-type: none"> Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. Any other relevant documents (if any). 		

86. Jockey pump

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Jockey pump: 7 hp Accessories: Butterfly valve, non-return valve, hydrant and wet riser, dry riser and hose reel		

Other Requirements	<p>Supplying and installation and testing of the equipment on site. Installation of pump house and piping work till the sprinkler head included. Installation of wet riser and hose reel Training of minimum 5 staffs The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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87. Fire command center

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>1. Power Supply</p> <ul style="list-style-type: none"> • AC Power Supply: 230V \pm 10%, 50/60 Hz. • Battery Backup: 24V DC rechargeable lead-acid batteries, typically providing backup for 24-72 hours, depending on the system size. <p>2. Display and Interface</p> <ul style="list-style-type: none"> • Display: Typically a LCD/LED screen to show real-time status, alarms, faults, and operational information. • Indicators: Visual (flashing lights) and audible (buzzer or siren) indicators for system status, alarm, and faults. • Touchscreen Interface (optional): For easier navigation and control. 		

	<ul style="list-style-type: none"> Buttons/Keypad: For manual operation, acknowledging alarms, resetting, etc. Menu: Allows access to system settings, logs, and configurations. <p>3. Capacity</p> <ul style="list-style-type: none"> Zones: Fire Command Centers often support multiple zones (e.g., 8, 16, or more). Each zone corresponds to a separate area of a building or structure. Loop Capacity: Can manage multiple loops for smoke detectors, heat detectors, and other monitoring devices. <p>4. Input and Output</p> <ul style="list-style-type: none"> Input: Receives inputs from detectors (smoke, heat, CO2), manual call points, and fire alarm systems. Output: Controls fire alarms, fire suppression systems (e.g., sprinklers), and activates fire pumps, emergency lights, and shutters. Relay Outputs: For activating external devices such as fire dampers, doors, ventilation, etc. <p>5. Communication and Networking</p> <ul style="list-style-type: none"> RS-485 Communication: For connecting with other panels or systems in large installations. Network Capability: Can integrate with other fire panels via protocols like Modbus, BACnet, or proprietary systems. Remote Monitoring: Integration for remote monitoring via an Ethernet port or GSM/Internet connectivity. Data Logging: Event logging for tracking system history, alarms, faults, and maintenance data. <p>6. Fire Alarm and Fault Monitoring</p> <ul style="list-style-type: none"> Alarm Conditions: Detection of smoke, heat, gas, and other fire hazards. 		
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	<ul style="list-style-type: none"> ● Fault Monitoring: Monitors system faults, such as sensor failure, wiring issues, or power loss. ● Event History: Stores a detailed event log with timestamps for troubleshooting and investigation. ● Self-diagnostics: Built-in diagnostics to monitor the health of the system. <p>7. Compliance and Standards</p> <ul style="list-style-type: none"> ● Standards: Compliant with local standards such as NFPA 72, EN 54, or UL 864. ● Certification: FCCs are often certified by recognized bodies like UL, FM, or LPCB. ● Test and Maintenance: Periodic testing capabilities to ensure system readiness. <p>8. Environmental Conditions</p> <ul style="list-style-type: none"> ● Operating Temperature: Typically, 0°C to 49°C (32°F to 120°F). ● Humidity: 95% RH non-condensing. ● Ingress Protection: Typically, IP30 or IP65 for dust and water resistance. <p>9. Physical Dimensions and Mounting</p> <ul style="list-style-type: none"> ● Rack or Wall-mounted: Depending on the building design, the FCC can be mounted on the wall or in a rack. ● Dimensions: Varies by model, generally 19" rack-mounted or a standalone panel. ● Weight: Weight can vary based on the size and complexity of the unit (usually in the range of 20-50 kg or more). <p>10. Security Features</p> <ul style="list-style-type: none"> ● Password Protection: Prevents unauthorized access to system settings and controls. 		
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	<ul style="list-style-type: none"> • User Levels: Different user levels (administrator, operator, etc.) to control access to sensitive operations. • Tamper Detection: Alerts in case of unauthorized tampering. 		
Other Requirements	<p>Supplying and installation and testing of the equipment on site. Supply compatible jockey pump Training of minimum 5 staffs The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

88. Fire Hydrant

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

<p>Technical Specification and Minimum Requirement s</p>	<p>Hydrants Material: Cast iron, ductile iron, or stainless steel Size: 100mm (4 inches) to 150mm (6 inches) Connection Type: Threaded or flanged connections Operating Pressure: 100 psi to 250 psi</p> <p>Valves Technical Specifications Main Control Valve: Brass, bronze, or ductile iron; sizes: 100mm (4 inches) to 200mm (8 inches) Outlet Valves: Similar materials and sizes; quick opening and closing features</p> <p>Pipes Technical Specifications Material: Mild steel, ductile iron, or HDPE - Size: 100mm (4 inches) to 300mm (12 inches) Pressure Rating: PN10 to PN16 or higher</p> <p>Couplings Technical Specifications Material: Brass, aluminum, or stainless steel Size: Matched to hose and hydrant sizes Type: Storz, instantaneous, or threaded configurations</p> <p>Hoses Technical Specifications Material: Synthetic rubber or thermoplastic Length: 15 meters (50 feet) to 30 meters (100 feet) Diameter: 38mm (1.5 inches) and 65mm (2.5 inches)</p> <p>Nozzles Technical Specifications Material: Brass, aluminum, or stainless steel Type: Adjustable spray, solid stream, or foam Specialized foam nozzles for foam-based suppression</p> <p>Pressure Gauges Technical Specifications Type: Analog or digital gauges Pressure Range: 0 to 300 psi or higher Accuracy: $\pm 1\%$ accuracy</p> <p>Fire Department Connection (FDC) Technical Specifications Material: Brass or bronze Size: 65mm (2.5 inches) or 100mm (4 inches) Type: Threaded or flanged connections for easy integration with municipal water supplies.</p>		
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Other Requirements	<p>Supplying and installation and testing of the equipment on site.</p> <p>Training of minimum 5 staffs</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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89. Hose reel system

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Material and Construction</p> <ul style="list-style-type: none"> • Reel Disc: Made of 1.2mm pre-treated electrogalvanized steel with electrostatic powder coating, oven-baked at 200°C. • Side Plates: Coated with polyester powder that meets ISO 9227 salt spray test (240hrs). • Hose Reel Drum: Formed with hydraulically pressed ribs for strength and a safe handling edge. <p>2. Types of Fire Hose Reel</p> <ul style="list-style-type: none"> • Fixed Type: Manual (LH19F, LH25F) and Automatic (LH19AF, LH25AF) with diameter 580mm and 30m hose length. <p>3. Hose Specifications</p> <ul style="list-style-type: none"> • Material: Semi-rigid rubber with 3-ply (2 synthetic rubber layers, textile reinforcement). • Diameter: 19mm & 25mm. • Max Working Pressure: 12 bar. • Max Burst Pressure: 42 bar. 		

- Proof Pressure: 24 bar.
 - Approval: BSI EN 694.
4. Nozzle
- Type: Rigid plastic, fast-opening with spray and jet discharge patterns.
 - Diameter: 6mm.
 - Spray Angle: >45°.
5. Valve Nipple
- Ball Valve Size: ¾" or 1".
 - Material: Brass.
6. Jet Spray
- Flow Rate at 6 bar:
 - 19mm: 48 L/min (Manual), 49.5 L/min (Automatic).
 - 25mm: 65.9 L/min (Manual), 83.9 L/min (Automatic).
 - Effective Throw Range at 2 bar:
 - 19mm: >10 meters.
 - 25mm: >10 meters.



Other Requirements	<p>Supplying, installation and testing of the equipment on site.</p> <p>Training of minimum 5 staffs</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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90. Riser training unit

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>1. Construction</p> <ul style="list-style-type: none"> • Material: Heavy-duty steel or stainless steel. • Size: Typically 3-5 meters tall; modular for easy setup and storage. • Weight: Designed for mobility or easy disassembly. <p>2. Pipework</p> <ul style="list-style-type: none"> • Material: Steel or corrosion-resistant materials. • Size: Usually 4-inch (100 mm) diameter. • Components: Suction inlets, isolation valves, landing valves, risers. <p>3. Water Supply</p> <ul style="list-style-type: none"> • Simulation: Uses an external tank or pressure pump. • Pressure Testing: Simulates up to 10 bar or more. • Flow Control: Pressure gauges and flow meters. <p>4. Control & Safety</p> <ul style="list-style-type: none"> • Safety Features: Pressure relief valves, emergency shutoff. • Monitoring: Pressure and flow meters for real-time tracking. 		

	<ul style="list-style-type: none"> • Training Features: Adjustable pressure, hose connections, realistic flow control. <p>5. Mobility</p> <ul style="list-style-type: none"> • Portable: Easy to transport, set up, and disassemble. • Modular Design: Can simulate different building configurations. <p>6. Training Scenarios</p> <ul style="list-style-type: none"> • Simulated Failures: Training for pressure loss and water supply issues. • Multiple Hoses: Practice deploying multiple hoses from one riser. <p>7. Compliance</p> <ul style="list-style-type: none"> • Standards: Meets local fire safety regulations (e.g., NFPA, BS 9990). 		
Other Requirements	<p>Designing, Supplying, installation and testing of riser training unit.</p> <p>Training of minimum 5 staffs</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		


91. Air conditioner (wall mount type)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

Technical Specification and Minimum Requirements	<p>Type: Split Air Conditioner Cooling Capacity: 1.5 Ton Energy Efficiency Rating: 3 Star Compressor Type: Rotary Refrigerant Gas: R32 Warranty: 1 Year Accessories: Remote, copper pipe (10m), insulator foam, water drain pipe (5m)</p> 		
Other Requirements	<p>Supplying, installation and testing of AC</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

92. Air conditioner (cassette type)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			


<p>Technical Specification and Minimum Requirements</p>	<p> Operation Type: Reverse Cycle (Heating and Cooling) Power Source: 230V / Single Phase / 50Hz Cooling Capacity: 7.10 kW (Min: 1.8 kW, Max: 8.1 kW) Heating Capacity: 8.00 kW (Min: 2.0 kW, Max: 9.1 kW) Input Power (Cooling): 2.15 kW (Max: 2.73 kW) Input Power (Heating): 2.10 kW (Max: 2.59 kW) Energy Efficiency Ratio (EER) Cooling: 3.3 Coefficient of Performance (COP) Heating: 3.81 Star Rating (Cooling): 3 / 3 / 3 (Hot / Average / Cold) Star Rating (Heating): 3.5 / 2.5 / 2 (Hot / Average / Cold) Running Current: Cooling: 9.4 A; Heating: 9.2 A Moisture Removal: 3.1 liters per hour Indoor Sound Pressure Level: Cooling: 35 dBA (High) / 30 dBA (Quiet); Heating: 35 dBA (High) / 30 dBA (Quiet) Outdoor Sound Pressure Level: Cooling: 48 dBA; Heating: 50 dBA Outdoor Sound Power Level: 68 dBA Air Circulation (Indoor - High Fan): 300 liters per second Indoor Unit Dimensions (HxWxD): 246 x 840 x 840 mm Indoor Unit Weight: 24 kg Outdoor Unit Dimensions (HxWxD): 716 x 820 x 315 mm Outdoor Unit Weight: 42 kg Grille Weight: 6 kg Piping Connections: Liquid: 6.35 mm Ø; Gas: 12.7 mm Ø Maximum Pipe Length: 30 meters (Pre-charged up to 20 meters) Maximum Height Difference: 25 meters Operating Range (Cooling): -10°C to 50°C DB Operating Range (Heating): -15°C to 24°C DB Refrigerant Type: R32 Refrigerant Charge: 1,250 grams </p> <div data-bbox="462 1270 1153 1858">  </div>		
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Other Requirements	<p>Supplying, installation and testing of AC with duct</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		
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93. Elevator training unit

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model	DLLY-4CDT equivalent/ Higher		
Country of Origin			
Technical Specification and Minimum Requirements	<ul style="list-style-type: none"> • Miniaturized elevator model with four layers for educational training. • Real-world elevator functions including automatic sliding, door operation, safety protection, and speed control. • PLC-based control system using Siemens S7-1200 with VVVF (Variable Voltage Variable Frequency) technology. • Transparent structure for clear visibility of mechanical and electrical operations. • Supports software-based ladder-diagram programming and PC connectivity via RS422/RS232 for PLC communication. • Open-architecture design for research and secondary development. <p>Electrical & Control System</p> <ul style="list-style-type: none"> • Input Power: AC 220V $\pm 5\%$, 50Hz • Power Rating: >1 kW • PLC Model: Siemens S7-1200 (with expansion) • Variable Frequency Device: Siemens M420-0.37 KW 		

	<ul style="list-style-type: none"> • Control Mode: Digital & switch control with VVVF technology • Traction Machine Power: 90W / 380V • Safety Features: Overload device, limit switches, emergency stop, leakage tripping device <p>Mechanical Specifications</p> <ul style="list-style-type: none"> • Overall Dimensions: 1980 × 660 × 3000 mm • Weight: ~1000 kg • Elevator Components: <ul style="list-style-type: none"> ○ Traction motor & tractive sheave ○ Guide rails (4 units) and guide wheels (2 units) ○ Rotary encoder for position detection ○ Spring buffers, counterweights, and tensioning devices ○ Door machine device for automatic operation ○ Car platform & layer doors ○ Permanent magnetic sensors for floor selection <p>Included Accessories</p> <ul style="list-style-type: none"> • Control panels for car and floor selection • Electrical control board with AC contactor and wiring board • DC 24V power supply plate • Programming cable & software CD • User manual & power cables <p>Training Capabilities</p> <ul style="list-style-type: none"> • Understanding elevator electrical components & control systems • Wiring, installation, and programming training • Speed control, braking adjustment, and smooth landing training • Safety and emergency response training • Encoder installation & converter connection • Elevator signal and lighting system training • Real-time PLC programming and debugging 		
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Other Requirements	<p>Supplying, installation and testing of the equipment</p> <p>One set of each accessories for the maintenance</p> <p>Training of at least 5 staffs</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> • Operation/Maintenance manual in English. • Warranty certificate: Minimum 10-year warranty from the date of acceptance of item. • Any other relevant documents (if any). 		

94. PLC and HMI training unit

Features	Required		
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<ol style="list-style-type: none"> 1. Training Structure <ul style="list-style-type: none"> ● Type: Floor-mounted PLC Training Kit (PH Advance model) ● Work Table: MDF top (1200mm × 800mm × 25mm thickness) ● Mobility: Four castor wheels with brakes ● Drawers: Pedestal with 4 drawers (400mm × 450mm × 550mm) ● LCD Mounting: Provided 2. Computer Station <ul style="list-style-type: none"> ● Processor: Intel i5, 7th Generation ● Monitor: 19" LCD ● Accessories: Bluetooth Keyboard and Mouse ● Storage: 500 GB Hard Disk ● Memory: 8 GB RAM ● Operating System: Windows 10 ● CPU & Monitor Stands: Included ● Communication Cable: Siemens Profinet cable 3. PLC Modules <ul style="list-style-type: none"> ● S7-1200 PLC: <ul style="list-style-type: none"> ○ Model: Siemens 1215C ○ TIA Portal Software: STEP 7 Basic V15 (Perpetual Floating License) ○ 24V 5A Power Supply ○ Input Module: 24 Inputs with Override Switches ○ Output Module: 24 Outputs 		

	<ul style="list-style-type: none"> ○ Field Modules for Inputs and Outputs ○ Patch Cord Set: 2mm type ● S7-1500 PLC: <ul style="list-style-type: none"> ○ Model: CPU 1512C-1 PN (250 KB/1 MB memory, 32 DI, 32 DO, 5 AI, 2 AQ) ○ Accessories: Ethernet Cable (6m), Memory Card (24MB), Front Connectors ○ STEP 7 Software License (Floating) <p>4. HMI Modules</p> <ul style="list-style-type: none"> ● KTP700 Basic HMI and KTP900 Basic HMI screens ● Communication: Profinet cables to SCALANCE Switch (XB005 - 5 Port) ● TIA Portal Software: STEP 7 Basic V15 License <p>5. IIOT / Industry 4.0 Module</p> <ul style="list-style-type: none"> ● Platform: Siemens Industry 4.0 Hardware ● Router: Minimum 30m coverage ● Memory Card: 8GB (Class 10) ● Profinet Cables: 7 meters <p>6. Sensor Modules</p> <p>43. Digital Sensors:</p> <ul style="list-style-type: none"> a. Capacitive, Photo, and Proximity Sensors (PNP, NO/NC types) <p>44. Analog Sensors:</p> <ul style="list-style-type: none"> a. Inductive (M12 and M18), Ultrasonic Sensors with Display <p>45. Sensor Module: Analog Power Supply with Digital Display</p> <p>7. Switchgear Module</p> <p>42. Components: Push Buttons (NO & NC), Selector Switches (NO & NC), Emergency Switches, Indicators, Buzzers</p> <p>8. Automation Modules</p> <ul style="list-style-type: none"> ● Pneumatic Module: <ul style="list-style-type: none"> ○ Double and Single Acting Cylinders, Solenoid Valves, Pneumatic Motor ● Stepper Motor Module:
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	<ul style="list-style-type: none"> ○ Stepper Motor (10 Kg cm), Drive, Power Supply ● Servo Motor Module: <ul style="list-style-type: none"> ○ Siemens 400W Servo Motor with Drive ● DC Motor & Encoder: <ul style="list-style-type: none"> ○ 24V DC Motor, Gearbox, 350 PPR Encoder, Speed Controller ● Pneumatic Pressure Switch Application: <ul style="list-style-type: none"> ○ Pressure Switch with Display, Pneumatic Valves ● AC Motor Speed Control: <ul style="list-style-type: none"> ○ Siemens G120C VFD (0.55 KW) + 0.5KW AC Motor ● Temperature Control Module: <ul style="list-style-type: none"> ○ Heater, Blower/Fan, Digital Temperature Indicator, Thermocouple/RTD ● Conveyor Control Module: <ul style="list-style-type: none"> ○ 70mm x 500mm Conveyor, Rotary Rejection Modules, Sensors ● Load Cell Module: <ul style="list-style-type: none"> ○ Load Cell (10kg capacity) with Amplifier ● Flow Sensor Module: <ul style="list-style-type: none"> ○ Pneumatic Flow Switch with Display <p>9. Static Modules</p> <ul style="list-style-type: none"> ● Traffic Light Control ● Elevator Simulation ● Water Level Control ● Staircase Lighting Simulation ● Conveyor Simulation ● AC Motor Star-Delta Connection Simulation
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Other Requirements	<p>Designing, Supplying, installation and testing of riser training unit .</p> <p>Training of minimum 5 staffs</p> <p>The following documents & certificates to be provided along with each machine.</p> <ul style="list-style-type: none"> ● Operation/Maintenance manual in English. ● Warranty certificate: Minimum 10 year warranty from the date of acceptance of item. ● Any other relevant documents (if any).

4. Drawings