

Prayas Centre Name Sardar Patel Technology Business Incubator

City Mumbai

State Maharashtra

Fablab Page Link <https://www.sptbi.com/equipments/>

Equipment available at SP-TBI DST PRAYAS SHALA

Section		Electronic/Prototyping Facility
Sr. No.	Equipment Name	Equipment Detail
1	3D Scanner	<p>Brand - Shining 3D Model - EinScan SE Specification - Accuracy Up to 0.1 mm Connectivity USB Technology Structured light Camera resolution 1.3 MP Output formats ASC, OBJ, PLY, STL Point distance 0.17 mm–0.2 mm Align Mode --> Fixed Scan without Turntable: Feature, Manual Fixed Scan with Turntable: Turntable, Manual Rotating table Yes Working range 0.29–0.48 m Max. scan volume 700 x 700 x 700 mm (Fixed Scan); 200 x 200 x 200 mm (Auto Scan) Single scan capture 10 seconds Texture / Color Yes Operations - (To make a 3D Design Replica of an Object) 3D Scan an Object to convert/Generate the object to 3D Design in 3D Scanner Software. Link of the user manual - https://encdn.shining3d.com/2020/09/EXScan-S_v3.0.0.1manual.pdf</p>
2	3D Printer Single Extruder	<p>Brand - Fracktal Works Model - Julia Extended Specification - Build Speed Up to 40 mm³/s Nozzle Temperatures Up to 280 °C Build Volume : 50 mm x 250 mm x300 mm Print Technology : FFF Filament Diameter : 1.75 mm Nozzle Diameter : 0.25 mm to 0.6 mm No. of Nozzles : 1 Supported Filetypes : STL, OBJ, X3D, 3MF,PNG, JPG Operations - Creating three-dimensional objects from digital models. Layer-by-layer additive manufacturing process. Used for rapid prototyping, product design, and custom creations.</p>
3	Vinyl Printing & Cutting Machine	<p>Brand - Roland Model - BN-20A Specification - Printing: Maximum 39 mil (1.0 mm) with liner</p>

		<p>Cutting: Maximum 16 mil (.4 mm) with liner Printing/cutting width1 Maximum 18.9 in (480 mm)</p> <p>Ink Cartridges Type & Capacity Roland ECO-SOL MAX 2, 220ml</p> <p>Colors 4 Color - CMYK (Cyan, Magenta, Yellow, Black)</p> <p>Printing resolution Max 1440 dpi</p> <p>Cutting Blade Type Roland CAMM-1 series cutter blade</p> <p>Cutting speed 0.4 (10 mm/s) to 5.9 in/s (150 mm/s)</p> <p>Blade force 30 to 300gf</p> <p>Operations - Building a t-shirt, poster, sticker, and decal graphics printing using this machine.</p> <p>Link of the user manual - https://www.folienwelt.de/media_4gm/Datenblaetter/BN-20A_USE_EN.pdf</p>
4	PCB Prototyping Machine	<p>Brand - Voltera</p> <p>Model - V-one</p> <p>Specification - Mains Power 230 V, 50 Hz</p> <p>Print Area 128 mm x 116 mm</p> <p>Dispensing Technology Direct ink write (DIW)</p> <p>Minimum Trace Width 0.2 mm</p> <p>XYZ Resolution 10 µm x 10 µm x 1 µm</p> <p>Substrate Fixturing Clamping</p> <p>Substrate Thickness Up to 3 mm</p> <p>Syringe Capacity Up to 2 mL</p> <p>Travel of Spindle 52 mm</p> <p>Operations - Creating prototype circuit boards for testing and design validation using conductive ink drawing method and solder paste method applying method. Rapidly fabricating custom PCBs for electronic projects.</p> <p>Link of user manual - https://files.gitbook.com/v0/b/gitbook-x-prod.appspot.com/o/spaces%2FKMS112mCuOJeZyXjzOqV%2Fuploads%2Fp0Dxgs15mSK6CBddTvzi%2FVoltera%20V-One%20Manual%20%5BEnglish%5D%202023.pdf?alt=media&token=8103fdaf-4e6a-4074-a842-864c160e5639</p>
5	Desktop PCB Marking and Engraving Machine	<p>Brand - Roland</p> <p>Model - MonoFab SRM20</p> <p>Specification - Operating Speed 6 – 1800 mm/min</p> <p>Power Consumption Approx. 50 W</p> <p>Workplace Table Size 232.2 (X) x 156.6 (Y)mm</p> <p>Distance From Collet Tip to Table Maximum, 5.15 in (130.75mm)</p> <p>Loadable Workpiece Weight 4.4 lbs. (2kg)</p> <p>X, Y, and Z Operation Strokes 203.2 (X) x 152.4 (Y) x60.5 (Z) mm</p> <p>Printing/Cutting Width Maximum 18.9 in (480 mm)</p> <p>Spindle Motor DC motor Type 380</p> <p>Spindle Rotation Speed Adjustable 3,000 –7,000 rpm</p> <p>Operations - Engraving and milling printed circuit boards (PCBs). Creating traces, holes, and patterns on PCB surfaces. A wide range of materials, including modeling wax, chemical wood, foam, acrylic, poly acetate, ABS and PC board can be precision milled using the SRM-20 small milling machine, allowing you to create realistic 3D prototypes that are virtually identical to production parts.</p> <p>Link of user manual - https://downloadcenter.rolanddg.com/contents/manuals/SRM-20_USE_EN_R4.pdf</p>
6	Reflow Oven	<p>Brand - VD Intellisys Technologies</p> <p>Model - VD960</p>

		<p>Specification - Power Supply 3 phase 5 line 380V 50/60Hz Peak Power 4.5 KW Length of the Heating Zone 960 mm Heating Type : Intelligent level sirocco and rapid infrared heating Width of PCB Board Max. 300 mm Operation Direction Left to Right Speed of Conveyer Belt 0-1600 mm/min Heating Up Time Around 15 mins Operations - Heating solder paste to melt and create solder joints for SMT components. Achieving consistent and controlled temperature profiles for reliable soldering.</p>
7	Infrared Camera	<p>Brand - FLIR Model - C5 Specification - Accuracy at ambient temp. 15 to 35°C (59 to 95°F) and object temp. above 0°C (32°F), 0 to 100°C (32 to 212°F): ±3°C (±5.5°F), 100 to 400°C (212 to 752°F): ±3% Digital Camera 5 MP Image Modes Infrared image, Visual image, MSX (Embossed visual details on thermal image), Picture-in-picture (IR area on visual image) Storage Media Internal memory and onboard FLIR Ignite cloud connectivity (with Wi-Fi) Measurements correction Emissivity; matt/semi-matt/semi-gloss + custom value, Reflected apparent temperature, Atmospheric compensation Object Temperature Range -20 to 400°C (-4 to 752°F) Thermal Sensitivity <70 mK Operations - Find hot fuses, air leaks, plumbing issues, and more. Identifying hidden problems is easy with the 160 × 120 (19,200 pixels) true thermal imager, MSX® (Multi-Spectral Dynamic Imaging), 5-megapixel visual camera, and LED flashlight. The C5 directly uploads and stores your images to the FLIR Ignite™ cloud, where you can organize and back up files. Then instantly share images with customers or create professional reports that document the problem and required repairs.</p>
8	Helping Hand and Magnifier Lamp	<p>Brand - Evanc Model - 10X+22X</p>
9	Quadcopter Assemble Kit	<p>Brand - Orange Model - Q450 Specification - Item Type Kit Propeller Type 1045 (10X4.5) Propeller Combo Controller Pixhawk 2.4.8 Drone Flight Controller PX4 32 Bit Autopilot – Good Quality Compatible Frame Q450 Quadcopter Frame Motor High-Quality EMAX MT2213 935KV Brushless DC Motor for Drone Operations - To assemble a Drone with BLDC motors supplied and Connecting Body parts to demonstrate Drone Making and Building and Also the Working of Drone and Flying.</p>
10	Digital Lux Meter	<p>Brand - Kusam Mecu Model - KM-LUX-99 Specification - Display: 18mm(0.7") LCD (Liquid Crystal Display) • Ranges: 1-100,000 Lux.(3 Ranges) 0 ~ 1,999 Lux, 2,000 ~ 19,999 Lux, 20,000 ~ 1,00,000 Lux. • Over-input: Indication of "1" • Sampling Time: 0.4second • Operating Temperature: 0°C to 50°C (32°F ~ 122°F)</p>

		<ul style="list-style-type: none"> • Operating Humidity: less than 80%R.H • Consumption current : Approx. 2mA • Dimension: 130 x 72 x 30mm • Weight: 170g (including battery) • Power Supply: DC9V battery . • Standard Accessories: Light Sensor, Instruction manual, Battery & Carrying case <p>NOTE: Accuracy tested by a standard parallel light tungsten lamp of 2854 K</p> <p>Operations - The Kusam-Meco Digital Lux Meter is a highly accurate instrument designed for measuring light intensity in various environments. It is widely used in industries such as photography, cinematography, lighting design, and facility management to ensure proper lighting conditions and optimize energy efficiency.</p>
11	Digital Tachometer	<p>Brand - Mextech Model - DT-2234C Specification - Testing Range 2.5 to 99999 RPM(r/min) Resolution : 0.1RPM (2.5 TO 999.9RPM) 1RPM (OVER 1000RPM) Accuracy ±0.05% Sampling Time : 0.8 sec (over 60 RPM) Operation Temperature : 0°C to 50°C Detecting Distance : 2 to 20 inch. Testing Parameters : RPM, m/min, ft/min</p> <p>Operations - Handheld Digital Tachometers used to check RPM and other spinning measurements of various types of equipment, like conveyors, windmills, rotary feeders, grinders, dryers, cooling equipment, augers and elevators.</p>
12	Digital IC Tester	<p>Brand - Metravi Model - DICT-2040 Specification - Self Diagnosis Identifies Unknown model number of Devices Measures more than 2000 kinds of devices Tests 54 / 74 series TTL Tests 4000 and 4500 series CMOS 40 Pin capability Control: 16 key tact switch keypad with dual tone sound indication Display: 6 Digit LED Display Test Socket: 40 pin ZIF Socket Library of ICs: TTL54 Series, TTL55 Series, TTL74 Series, TTL75 Series, CMOS14 Series, CMOS40 Series, Optical Coupler Series, LED Display Series, RAM Series, SCM Series, CPU Peripheral Series Auxiliary Power Supply: 220V AC 50Hz</p> <p>Operations - Essential tool for determining the presence of electrical currents within wires, circuits and devices. It comes in various forms such as voltage testers, multimeters, and continuity testers that cater to specific electrical diagnosis and repair needs.</p>
13	Rework Station	<p>Brand - Soldron Model - 878D Specification - Watts: 600 watts all combined Iron: 60watts 480°C max. Hot air blower: 550 watts max 450°C max. Input Voltage (VAC): 230 Weight: 3.47 kg</p>

		Operations - 2-in-1 hot air and soldering station designed for professional electronics repair and rework.
14	Linear IC Tester	Brand - Minimax Electronics Model - MME LICT 20 Specification - Keyboard: 24 feather touch keys. Display: 16-character LCD dot matrix display. Voltage: 230 Volts +- 10% 50 Hz AC. Functional Test - Yes Parameter Test - No Operations - Testing linear integrated circuits for functionality and performance. Verifying proper amplification, signal processing, and voltage regulation.
15	Helping Hand and Magnifier Lamp	Brand - BT Model Model - TE-803 Operations - 10 LED Light Lens Auxiliary Clip Magnifier with Soldering Stand, this multi-functional magnifier is specially designed for soldering or other repair work.
16	DC Motor	Brand - BLDC DC motor Model - DYS D2258 Specification - Weight: 102g (including connectors) Diameter of shaft: 5mm Dimensions: 35x36mm Prop size: 7.4V/11x5 14.8V/10x6 Max thrust: 800g Operations - Brushless DC motors in industrial engineering, used for motion control, linear actuators, servomotors, actuators for industrial robots, extruder drive motors and feed drives for CNC machine tools.
17	Electric Tracker	Brand - FERM Model - ETM1006 Specification - Accepts Nails of lengths 15, 20, 25, or 32mm Operations – Can tackle large quantities in a short time, without any effort. They enable powerful tacking, are suitable for time-consuming work and protect your joints. Electric tacker, also known as electric nailers or electric tacker, are ideal for regular, universal use.
18	Bidirectional DC Power Supply with Solar Simulator	Brand - ITECH Model - IT6006C-300-75 Specification - Voltage, Current & Power 300V, 75A & 6kW Accuracy $\leq 0.03\% + 12\text{mV} / \leq 0.05\% + 20\mu\text{A}$ Command Response Time 2mS Efficiency $\sim 92\%$ Isolation-output to ground 1000V Power Factor 0.99 Remote Sense Voltage $\leq 5\text{V}$ Resistance up to 1 ohm Resolution 0.01V/0.01A Interface : USB, CAN, LAN, VCP Operations - Enables high-speed source & sink current fast & continuous seamless switching, effectively avoiding voltage or current overshoot. Solution for Power Supply and Electronic Load in One with Bi-directional Energy Transfer and Battery, Smart Device & Automotive Electronic Test etc. With simulation function, up to 10,000,000 points.
19	100 Mz 4 Channel Digital Storage	Brand - Tektronix Model - TBS2104B

	Oscilloscope (DSO)	<p>Specification - 100 MHz Bandwidth, 4 Channel Digital Storage Oscilloscope, 2 GS/s sample rate, 4-channel digital storage oscilloscope, 5 Mpts record length, 9-inch WVGA color display with 15 horizontal grids shows 50% more signal, TekVPI probe interface supports active, differential, and current probes with automatic scaling and units. New front-end design enables more accurate measurements, 32 automated measurements, and FFT function for quick waveform analysis</p> <p>Operations - Help you debug and validate your designs faster. Electronic instrument that measures and records electrical signals. It converts the analog signal into a digital format and stores it in its digital memory, allowing for easy recall and analysis. The main purpose is capturing information on electrical signals for debugging, analysis, or characterization. The displayed waveform can then be analyzed for properties such as amplitude, frequency, rise time, time interval, distortion, and others.</p>
20	Hand Held Power Analyzer	<p>Brand - HIOKI</p> <p>Model - PW3365</p> <p>Specifications - Measurement Types: Single-phase (2/3 wires), Three-phase (3/4 wires), Current only (1-3 channels)</p> <p>Voltage Range: 400 V AC (90.0 V to 520.0 V effective)</p> <p>Harmonics: Voltage, current, THD (up to 13th order)</p> <p>Current Range: 500 mA to 5 kA AC, 50 mA to 5 A (Leak clamp)</p> <p>Power Range: 200 W to 6 MW</p> <p>Waveform Storage: Binary data</p> <p>Interfaces: SD/SDHC card, LAN, USB 2.0 (data download, remote settings)</p> <p>Power Supply: AC adapter (100-240 V), Battery pack (DC 7.2 V, 5 hrs. use)</p> <p>Functions Voltage, current RMS, power, energy, power factor, demand quantity/values, waveform peak, frequency, harmonic analysis</p> <p>Operations - Measures voltage, current, power, energy, harmonics, and more.</p>
21	Basic Function Generator	<p>Brand - BeeTech</p> <p>Model - 1603</p> <p>Specification - Waveform - Sine, square, triangle and TTL with symmetry</p> <p>Power 230V +- 10%, 10VA</p> <p>Weight 3 kg</p> <p>Operations - The heartbeat of many electronic circuit designs and testing procedures. They provide the "input" that helps engineers study and analyze the "output" of their designs. It can be used to test a design or confirm that a piece of electronic equipment is working as intended.</p>
22	DC Regulated Power Supply Single Output	<p>Brand - SAIRUSH</p> <p>Model - SVL032002</p> <p>Specifications - Output Voltage: 0 to 32V</p> <p>Output Current: 0 to 2A</p> <p>Control: Separate Course & Fine Control for Voltage & Current</p> <p>Line Voltage: 230V AC \pm 10%, 50Hz single-phase</p> <p>Metering: 3 Digit DPM to display Output Voltage & Current separately</p> <p>Mode of Operation: CV, CC mode with LED indication</p> <p>Line Regulation: \pm 0.05% +5mV for \pm10% change in line output</p> <p>Load Regulation: \pm 0.05% +5mV for load change from zero to full load</p> <p>Ripple and Noise: 3mV rms max, 20Hz to 20MHz</p> <p>Protection: Overload & Short Circuit</p> <p>Operating Temperature Range: 0 – 50°C</p>
23	50 Mz 2 Channel Digital Storage Oscilloscope (DSO)	<p>Brand - Tektronix</p> <p>Model - TBS1052C</p> <p>Specifications - Bandwidth: 50 MHz</p>

		<p>Number of Channels: 2 Record Length: 20K points Sample Rate: 1 GS/s Amplitude: 1 mVp-p to 10 Vp-p into 50 Ohm loads Modulation: AM, FM, PM, ASK, FSK, PSK, PWM Built-in: 200 MHz counter & 6-digit resolution Modes: Continuous, sweeping, burst, and modulation modes Operations - Measures signals and tests various waveforms. 32 automated measurements for fast, convenient testing of diverse signal conditions. Dual window FFT for simultaneous time and frequency domain views, providing insight into signal frequency content.</p>
24	25 Mz 2 Channel Function Generator	<p>Brand - Tektronix Model - AFG1022 Specifications - Arbitrary Waveforms: 125 MS/s Amplitude: 1 mVp-p to 10 Vp-p into 50 Ohm loads Frequency: 25 MHz Modulation: AM, FM, PM, ASK, FSK, PSK, PWM Number of Channels: 2 Record Length: 8k points Vertical Resolution: 14 bits Voltage: 230V Built-in: 200 MHz counter & 6-digit resolution Modes: Continuous, sweeping, burst, and modulation Operations - Create: Custom-defined signals for circuit stimulus and testing. Replicate: Synthesize real-world signals not available in the lab (captured from an oscilloscope). Generate: Ideal or stressed reference signals for industry standards with specific tolerances.</p>
25	Electronic Dry Cabinet	<p>Brand - HINISO Model - AD-125S Specifications - Colour: Black Capacity: 139 liters Material: Metal Operation Mode: Automatic Item Weight: 22.2 kg Included Components: Dry Cabinet, Adapter, Manual Special Features: Adjustable Operations - Electronic dry cabinet used for preserving moisture-sensitive items, including camera equipment, by controlling humidity levels and preventing damage from moisture, dust, and other factors.</p>
26	Hot Glue Gun	<p>Brand - Stanley Model - 69 GR20B Specification - Item Weight 270 g Wattage 30 Watts Voltage 240 Volts Compatible Material Foam, Metal, Fabric Operations - Heating Glue Stick by electric power and then applying the glue from Gun nozzle to desired area.</p>
27	Wire Stripper	<p>Brand - Stanley Model - 84-214-22 Operations - Cut Wire insulation without removing inner copper core.</p>
28	Solder Wick	Brand - Techno System
29	GPIO Modules	<p>Brand - Numato Labs Specification - GPIO module</p>

		<p>Operations - Expand the number of GPIO pins available on a device, such as a microcontroller or single-board computer (SBC). GPIO pins are versatile I/O pins that can be used for both input and output operations, allowing the device to interface with various external components and sensors and more.</p>
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Section		
Metalworking Facility		
Sr. No.	Equipment Name	Equipment Detail
1	CO2 Laser Engraver and Cutting Machine	<p>Brand - SIL Model - Accucut 6090 Specification - Working Area : 600mm x 900mm Laser Power Option Glass Tube - 130 W Metal Tube - 100 W Cutting Speed 0 ~ 30000 mm/min Engraving Speed 0 ~ 64000 mm/min Cooling Mode Water Cooled Reposition Accuracy 0.1 mm (Max) Graphic Format Supported PLT, CDR, AI, DWG,DST, DXF, BMP, JPEG,TIFF, GIF, PCX Operations - Cutting and engraving various materials, including wood, acrylic, leather, fabric, and paper. Creating intricate designs, patterns, and detailed artwork. Precision cutting for delicate components and objects.</p>
2	Mini Lathe with Milling and Drilling	<p>Brand - Proxxon Model - PD400+PF230 Specification - PD400 Power and Motor 550W to 750W Spindle Speed 80 RPM to 2,800 RPM No. of Nozzles 1 PF230 Power: 110 - 120V Frequency 60Hz Speeds 280 - 550 - 870 - 1,200 - 1,500 and 2,200rpm Operations -Milling and drilling operations on metals, plastics, and wood. Creating holes, slots, and groove with precision. Shaping and contouring surfaces for various projects.</p>
3	Bench Drill Machine	<p>Brand - Proxxon Model - TBM220 Specification - Power: 230V. 85W. 50 - 60Hz. Spindle speeds of 1,800, 4,700 and 8,500rpm. Extremely high rotational accuracy, 30mm feed. Throat Depth 140mm. Weight 3.3kg. Operations - This bench drill is a small-hole drilling machine that is small in size and easy to operate. It is usually installed on a special workbench. It is mainly used for drilling, reaming and tapping of various material workpieces.</p>
4	Table Saw	<p>Brand - Stanley Model - SST1801-B1 Specification - Voltage 240 Volts Item Weight 27000 Grams Speed 4500 RPM Blade Length 254 Millimeters Number of Teeth 60</p>

		<p>Wattage 1800 Watts Blade Shape Round Number of Memory Sticks 1 Item Weight 27 kg Operations - Table saws are versatile saws used for cutting across (crosscut) and with (rip) the wood grain. They are most commonly used to rip. After adjusting the height and angle of the blade, the operator pushes the stock into the blade to make the cut. A guide (fence) is used to maintain a straight cut parallel to the blade.</p>
5	Arc Welding	<p>Brand - Ador Model - Champ Arc 201 Specification - Current 200 Amp Voltage 240 V Frequency 50 Hz Efficiency 86 % Technology IGBT Insulation Class F Class Open Circuit Voltage 55 V Welding Electrode Size 2.5 mm, 3.2 mm, Intermittent 4 mm Operations - Joining metals using an electric arc to create a strong bond. Suitable for heavy-duty welding and construction projects. It's an inverter-based welder with constant output current. Usable for TIG & MMA welding, and for scratch start TIG in 'TIG' mode for normal operation.</p>
6	Spot Welding Machine	<p>Brand - Epic Technologies Model - EPI10 Operations - Resistance spot welding to join overlapping metals between two electrodes using electrical resistance. Squeezing the workpieces between the electrodes applies pressure, and the passage of welding current through the resistive metals generates heat. This allows the materials to bind together and form a welding joint. Spot welding has its name as the current is applied precisely over a small area on the metal's surface.</p>
7	Drill Sharpener	<p>Brand - Proxxon Model - BSG 220 Specification - Replacement spare discs for BSG 220 (50 x 13mm) Corundum (grade N) With 12.7mm bore 230V, 85W Corundum grinding disc size 50 x 13mm. ABS housing with fixing holes. Weight 1.7kg. Operations - Moves from left to right and also rotates the drill bit on its own axis. This operation yields the correct relief angle. The carriage is fitted with a feed screw for fine feed. A dressing stone, ensuring a sharp cutting surface, is also fitted.</p>
8	Portable Welding Machine	<p>Brand - Rilox Model - MIG 250 Specification - Current 200-300 A Model Name/Number MIG 250 Capacity 250AMP Welding Type MIG Welding Voltage 220-240 V Usage/Application AA TYPES OF FABRICATION Cooling Mode AIR COOLED Automation Grade Semi-Automatic Frequency 50-60 Hz</p>

		<p>Phase Single Phase</p> <p>Operations - MIG welding is an automatic or semi-automatic arc welding process used to join pieces of metals together. It produces high-quality welds with faster speed. During welding, the welder uses a welding torch to continuously feed a consumable heated wire electrode and shielding gas.</p>
9	Grinder Straight	<p>Brand - DEWALT</p> <p>model - DW882-QS</p> <p>Specification - Style Straight Grinder Power Source Corded Electric Item Weight 7.25 Kilograms Voltage 240 Volts Wattage 1800 Watts Maximum Rotational Speed 5600 RPM</p> <p>Operations - Professional grinder, sander, wire brush, polisher or cut-off applications.</p>
10	Mitre Saw	<p>Brand - Bosch</p> <p>Model - GCM-10MX</p> <p>Specification - Input Power 1700 W Saw Blade Diameter 254 mm Mitre Setting 47° L / 52° R Bevel Setting 45° L Saw Blade Bore Diameter 25.4 mm Speed 4800 RPM</p> <p>Operations - Cutting angles in wood and other materials like Wood, Aluminum, Composite Sheets, Plastic, MDF. Creating precise crosscuts and miterjoints.</p>
11	Pipe Vice	<p>Brand - Taparia</p> <p>Model - PV03</p> <p>Operations - To Hold Pipe in immovable position while cutting a pipe.</p>
12	Tin Cutter With Springs	<p>Brand - Taparia</p> <p>Model - TCS 08</p> <p>Specification - Spring based Cutter</p> <p>Operations - Can be used for cutting aluminium, vinyl siding, screening, cardboard, leather and copper.</p>
13	Bench Vice	<p>Brand - JET</p> <p>Model - JE3</p> <p>Operations - Used to hold a specific thing to perform different tasks, such as gluing, filing, sawing, or pounding.</p>
14	Air Operated Grease Gun	<p>Brand - Groz</p> <p>Model - vgp 20</p> <p>Specification - Grease Bucket Capacity 20 kg (44 lbs.) High pressure rubber hose 2m x 1/4 inch Develops (High Pressure Setting) 150 PSI (10 BAR) Delivers (High Pressure Setting) 7,500 PSI (500 BAR) Develops (Medium Volume Setting) 3,000 PSI (207 BAR) Delivers (Medium Volume Setting) 7 gms / stroke Develops (High Volume Setting) 2,000 PSI (137 BAR) Delivers (High Volume Setting) 9 gms / stroke</p> <p>Operations - Apply lubricant through an aperture to a specific point, usually from a grease cartridge to a grease fitting. The channels behind the grease nipple lead to where the lubrication is needed.</p>
15	Vacuum Cleaner	<p>Brand - Bosch</p> <p>Model - GAS 15 PS</p>

		<p>Specification - Rated input power 1,100 W Weight 6 kg Container volume, net 10 liter Container volume, gross 15 liter Container volume, net, water 8 liter Filter surface area 2,300 cm² Max. airflow rate (turbine) 53 liter/sec Max. vacuum pressure (turbine) 270 mbar Wheels, number 4</p> <p>Operations - Heavy-duty cleaning tasks. Features a high-performance motor that delivers exceptional suction power, and comes with a range of accessories to help clean every nook and corner of workshop or garage. The vacuum cleaner also has a durable and easy-to-clean filter, and a large dust bag that can be easily emptied.</p>
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Section		Power Tool
Sr. No.	Equipment Name	Equipment Detail
1	Magnetic Core Drill Machine	<p>Brand - Bosch Model - GBM50-20 Specification - Rated input power 1200 W Weight 14.7 kg Voltage, electrical 220–230 V 1st gear 50 – 250 rpm 2nd gear 100 – 510 rpm Drill spindle connecting thread MT 2 - DIN 228 Drilling diameter in steel 1.5 / 50 mm Operations - Drilling precise holes in metal using a magnetic base for stability. Suitable for large-scale hole drilling in industrial setting.</p>
2	Drill Machine	<p>Brand - Bosch Model - GBM 13RE Specification - Voltage 220 Volts Amperage 16 Amps Special Feature Lock Speed Button Speed 2600 RPM Item Weight 1940 Grams Maximum Power 600 Watts Item Torque 20 Newton Meters Drill Type Basic Drill Wattage 600 Watts Operations - The operations that are commonly performed on drill machines are drilling.</p>
3	Drill Machine	<p>Brand - FERM Model - TDM 1026 Specification - Mains voltage 230V~, 50Hz - Input power 350W - Chuck capacity 13mm - Taper of spindle B16 - No load speed 500-890-1.400-1.900-2.500/min. - Total height 600mm - Travel of spindle 52mm - Horizontal distance 104mm chuck to column Operations - Achieve the best drilling results with materials such as steel and</p>

		wood. The perpendicular position of Drill gives perfect drilled holes without any angular distraction while drilling. The workpiece must be securely held in place on the drill table during drilling operations using vises and clamps.
4	Circular Saw	<p>Brand - Bosch Model - GKS 190 Specification - Amperage 15 Amps Item Weight 6230 Grams Speed 5200 RPM Blade Length 7 Inches Number of Teeth 24 Cutting Angle 90 Degrees Wattage 1.4 Watts Blade Shape Round Operations - Cutting wood or metal based on Blade type.</p>
5	Cordless Drill	<p>Brand - Bosch Model - GSR 180Li Specification - Power Source Battery Powered Voltage 18 Volts Amperage 16 Amps Maximum Chuck Size 0.5 Inches Special Feature Lock Speed Button Product Dimensions 35L x 29.4W x 9.9H Centimeters Number of Speeds 2 Speed 1900 RPM Item Weight 3400 Grams Maximum Power 850 Watts Item Torque 54 Newton Meters Battery Capacity 2 Amp Hours Operations - The machine is intended for the screwing in and loosening of screws as well as for drilling in wood, metal, ceramic and plastic.</p>
6	Blower	<p>Brand - Bosch Model - GBL620 Specification - Rated input power 620 W Weight 1.7 kg Volumetric flow rate 3.5 m³/min Voltage, electrical 230 V speed 16,000 rpm Operations - To blow grass clippings, dirt, and debris off of sidewalks, driveways, and other surfaces like dust inside a computer or on a table or Sliding window, etc.</p>
7	Router Bit Starter Kit (Set 15 Pcs)	<p>Brand - Bosch</p>
8	Power Router	<p>Brand - Bosch Model - GKF 550 Specification - Rated input power 550 W speed 33,000 rpm Compatible collet diameters 6 mm Weight 1.4 kg Operations - Palm routers can be used to round-over edges, leaving a smooth curved edge on trim pieces of wood.</p>
9	Sewing Machine	<p>Brand - Singer Model - 9900 Specification - Power Consumption 220V</p>

		<p>Max Sewing Speed 5,000 SPM(Adjustable) Max Stitch Length 5mm Presser Foot by Hand: 5.5mm By Knee: 13mm Needle Single: DBx1 #14 Motor Direct Drive in-built motor-ESDD (550w) Needle Bar Stroke 30.7 mm Hook Type Regular Application Light-to-medium weight Operations - Stitching fabric layers together for sewing projects. Creating various types of stitches, including straight and zigzag. Hemming, seaming, and embellishing fabric. It features fully automatic lubrication.</p>
10	Jig Saw	<p>Brand - Bosch Model - GST 150 BCE Specification - Rated input power 780 W Cable length 4 m Stroke rate at no load 500 – 3,100 rpm Weight 2.7 kg Operations - The GST 150 BCE Professional is a corded, robust jigsaw for tough applications. This tool is intended for curved cutting in solid wood, chipboard, and wood composites.</p>
11	Hot Air Gun	<p>Brand - Bosch Model - GHG180 Specification - Rated input power 1800 W Voltage, electrical 230 V Weight 0.75 kg Working temperature 60 – 550 °C Heat-up time 1 s Airflow 350 – 550 l/min Operations - Heat gun operating at different temperatures and with different airflow can be used to strip paint, shrink heat, shrink tubing, shrink film, and shrink wrap packaging, dry out damp wood, bend and weld plastic, soften adhesives, and thaw frozen pipes.</p>
12	Angle Polisher	<p>Brand - Bosch Model - GPO12CE Specification - Rated input power 1250 W speed 750 – 3,000 rpm Grinding spindle thread M14 Rubber sanding plate, diameter 180 mm Weight 2.5 kg Operations - High-performance polisher that is ideal for a wide range of applications, from automotive detailing to woodworking and metalworking. this tool provides precise control over the polishing process, allowing you to achieve a perfect finish every time.</p>
13	Hot Air Gun	<p>Brand - Dewalt Model - DCE530 Specification - Temperature Range 290 to 530 Degree C Voltage 18V Air Flow 109-190 l/min Weight 0.5 kg Length 161 mm Height 194.8 mm Operations - Dedicated cordless heat gun designed for shrinking electrical tubing, bending PVC pipes, drying materials, loosening nuts and bolts and many</p>

		more.
14	Cordless Screw Driver	<p>Brand - Bosch Model - Go Specification - Voltage 3.6 V Speed 0-360 RPM Battery Type Lithium-ion Torque Hard: 5 nm Battery Voltage 3.6 V Chuck Capacity 6.35 mm Operations - Screwdriving in wood, metal and plastic as well as working on filigree applications such as motherboards or electrical cabinets. It is compatible with all standard USB chargers.</p>
15	Electric Rotary Kit	<p>Brand - Dremel Model - 3-in-1 rotary tool kit - Dremel 4000 Specification - Amperage 1.6 Attachment Compatibility All Rotary Attachments Bluetooth Connected Yes Cord Length (ft.) 6.0 Digital Display Screen No Height in 2.0 LED Work light No Length in 6.0 Replaceable Motor Brushes Yes Soft Grip Yes Speed 5,000 to 35,000 RPM Tool Level 1 - Corded – variable speed high Versatility Meter High Voltage 120V Weight (oz.) 22.5 Width in 2.0 Operations - Versatile, handheld power tool with a fast-spinning motor tip for grinding, sanding, honing and polishing a variety of materials. Rotary tools have a large assortment of attachments designed for different tasks, making them a staple in many toolboxes.</p>
16	Metal bits & Wooden bits	<p>Brand - Bosch Model - 11HSS-TIN</p>
17	Annular Cutter	<p>Brand - Bosch Model - GBM 50-20 Specifications - TCT Annular cutter 35x22 mm</p>
18	Annular Cutter	<p>Brand - Bosch Model - GBM 50-20 Specifications - TCT Annular cutter 50x26 mm</p>

Section		
Supply & measuring equipment		
Sr. No.	Equipment Name	Equipment Detail
1	Digital Multimeter TRMS	<p>Brand - Fluke Model - 87-5 Specification - VOLTAGE DC MAXIMUM VOLTAGE 1000 V ACCURACY $\pm(0.05\% + 1)$ MAXIMUM RESOLUTION 10 MV VOLTAGE AC MAXIMUM VOLTAGE 1000 V</p>

		<p>ACCURACY $\pm(0.7\% + 2)$ TRUE RMS AC BANDWIDTH 20 KHZ WITH LOW PASS FILTER; 3 DB @ 1 KHZ MAXIMUM RESOLUTION 0.1 MV CURRENT DC MAXIMUM AMPS 10 A (20 A FOR 30 SECONDS MAXIMUM) AMPS ACCURACY $\pm(0.2\% + 2)$ MAXIMUM RESOLUTION 0.01 MA Operations - Provides the resolution and accuracy to efficiently troubleshoot motor drives, plant automation, power distribution, and electromechanical equipment - even in loud, high-energy, and high-altitude locations.</p>
2	Handheld LCR Meter	<p>Brand - GW Instek Model - LCR 915 Specifications - Type: Handheld Max Test Frequency: 10 kHz Max Capacitance: 20,000 μF Max Resistance: 200 MΩ Max Inductance: 20,000 H Measurement Parameters: AC Resistance (Rac), Capacitance (C), DC Resistance (Rdc), Inductance (L), Phase Angle (θ), Quality Factor (Q) Auto Ranging: Yes Data Hold: Yes Counts: 20,000 Display: Dual 20,000/2000 count for primary and secondary parameters Interfaces: USB Data Logging: Yes Battery Type: AA Shipping Weight: 2 lbs Unique Features: Dual count display for primary and secondary parameters, optional AC power operation. Operations - Type of electronic test equipment used to measure the inductance (L), capacitance (C), and resistance (R) of an electronic component.</p>
3	Non-Contact Voltage Tester and Flash Light	<p>Brand - Fluke Model - LVD2 Specifications - Type: Non-contact AC voltage tester and LED flashlight Voltage Detection Range: 90 to 600 V AC Sensitivity: Dual-sensitivity for two levels of detection Indicator Lights: <ul style="list-style-type: none"> • Blue light: Indicates proximity to AC voltage source • Red light: Indicates you're at the source LED Flashlight: Ultra-bright white LED with 100,000-hour bulb life Safety Rating: CAT IV 600 V Operating Temperature: 0°C to 50°C Battery: AAA battery included Operations - Combines a non-contact AC voltage detector and LED flashlight in a convenient pen-style design. It features dual sensitivity detection: the light turns blue when 1" to 5" (2.54 cm to 12.7 cm) from the source and red when at the source. Rated CAT IV 600 V, the LVD2 is ideal for commercial and industrial applications.</p>
4	AC/DC Clamp Meter	<p>Brand - Fluke Model - 362 Specifications - Design: Thin, light, and compact for one-hand operation Jaw Size: 18mm triangular jaw for easy measurement on small cables Display: Large, easy-to-read backlit display Current Range: 200 A ac and dc</p>

		Voltage Range: 600 V ac and dc Resistance Range: 3000 Ω with continuity detection Zero Function: Clears the display for DC measurements Data Hold: Yes Safety Rating: CAT III 600 V
5	Digital Multimeter	Brand - Fluke Model - 15B+ Specification - Maximum voltage between any terminal and earth ground 1000V Display (LCD) 4000 counts, updates 3/sec Battery type 2 AA, NEDA 15A, IEC LR6 Battery life 500 hours minimum Temperature Operating 0 °C to 40 °C Storage -30 °C to 60 °C Operations -600 V Cat III safety rating AC/DC voltage measurement up to 1000V AC/DC current measurement up to 10A Measures voltage, resistance, continuity, capacitance Diode test, data hold Large easy-to-read display with bright white backlight

Section		Hand tools	
Sr. No.	Equipment Name	Sr. No.	Equipment Name
1	Stanley - Ring Spanner (Set 12 Pcs)	2	Stanley - Chisel (Set 6 Pcs)
3	Stanley - Hacksaw Mini	4	Alkon - Pegboard
5	Stanley - C-Clamp	6	Stanley - Ball Pen Hammer
7	Stanley - Open End Spanner (Set 8 Pcs)	8	Black & Decker - Needle File (Set 5 Pcs)
9	Stanley - Combination Plier	10	Stanley - Wrench Set
11	Stanley - Rubber Grip Hacksaw	12	Stanley - Rubber Mallet
13	Warner - Tool Wall Covering Perforator	14	Jon Bhandari - Big File 8" (Set 6 pcs)
15	Stanley - Tongue and Groove Pliers	16	Stanley - Claw Hammer Steel Shaft
17	DS-Space - File Handles	18	Stanley - Allen key (Set 9 Pcs)

Section		Measuring Instruments	
Sr. No.	Equipment Name		
1	Stanley - Meter Tape (3m)		
2	Insize - Inside Spring Caliper		
3	Insize - Degree Protractor		
4	Insize - Tri Square		
5	Stanley - Spirit Level		
6	Kristeel - Steel Rule 300mm		
7	Insize - Digital Vernier Caliper		
8	Proskit - Fish Tape		