

Prayas Centre Name : Maker Village, KINFRA, Kerala Technology Innovation Zone, Kochi

City : Kalamassery, Kochi

State : Kerala

Fablab Page Link :

Equipment available at Maker Village:

Section		Electronic/Prototyping Facility
Sr. No.	Equipment Name	Equipment details
1	SLS Industrial 3D Printer	<p>Brand – HP</p> <p>Model – Multi Jet Fusion 4200</p> <p>Specification - Automated mixing, sieving, and loading, semi-manual unpacking, external storage tank, Processing station with fast cooling, Effective building volume 380 x 284 x 380 mm, Layer thickness 0.08 mm (0.003 in), Job processing resolution (x, y) 600 dpi, Print resolution (x, y) 1200 dpi.</p> <p>Operational area – HP Jet Fusion 4200 3D Printer Operating area 3700 x 3700 x 2500 mm, HP Jet Fusion 4200 3D Processing Station with Fast Cooling Operating area 3190 x 2434 x 2500 mm</p> <p>Link of the user manual - http://h10032.www1.hp.com/ctg/Manual/c06069841.pdf</p>
2	3D Scanner	<p>Brand – Shining 3D</p> <p>Model – EinScan-SE</p> <p>Specification – Shining 3D's Einscan SE offers reliable 3D scanning with a high price-to-performance ratio. Create precise & high-quality 3D scans right at your desktop with Shining 3D's Einscan SE. Maximum Scan Volume: 700×700×700 mm (fixed scan) and 200×200×200 mm (auto scan)</p> <p>Operational area – 570×210×210 mm</p> <p>Link of the user manual - https://www.einscan.com/desktop-3d-scanners/einscan-se/einscan-se-specs/</p>
3	Vinyl Printer and Cutter	<p>Brand - Roland</p> <p>Model - SG 540</p> <p>Specification - new TrueVIS SG series printer/cutters offer all the quality and versatility of a Roland, at an unbeatable price. TrueVIS ushers in a new era of integrated printing and contour cutting, and the SG delivers the value you need to quickly and easily build your business, Large-Format Printers + Printer/Cutters, Family: Eco-Solvent, Series: TrueVIS, Ink Configuration: CMYK (Only), Ink: TrueVIS INK (TR) TR-xx, Cleaning Cartridge: TR-CL, Accessories: TUC-2 & TU2-54,</p> <p>Operational area – DIMENSIONS/WEIGHT: 105.7(W) x 29.3(D) x 51.6(H) 2685(W) x 745(D) x 1310(H) mm, 392 lb (178kg)</p>

		<p>Applications: Die-cut Labels and Stickers, Banners, Personalized T-Shirts and Apparel, Signs, Vehicle Wraps, Posters and Backlit Displays, Wall Graphics and Murals, Fine Art and Photos</p> <p>Link of the user manual - https://www.rolanddga.com/support/products/print-printcut/truevis-sg-540-printer-cutter</p>
4	3D Printer FDM	<p>Brand – MakerBOT</p> <p>Model – Replicator Mini +</p> <p>Specification – The Replicator Mini+ is Cloud-enabled so you can control it remotely with MakerBot Print or the MakerBot Mobile app. With MakerBot Print, you can import Native CAD files, auto-arrange them during print preparation, and then print them on one or more printers.</p> <p>Operational area – Product Dimensions: 29.5 L X 34.9 W X 38.1 H CM</p> <p>Link of the user manual - https://www.makerbot.com/3d-printers/replicator-mini/</p>
5	3D Printer FDM	<p>Brand – Raise3D</p> <p>Model – Pro 2 Plus</p> <p>Specification – Electronic Driven, Dual Extrusion with Retracting Hot Ends; 4× Increased torque performance, Massive Build Volume (12×12×23.8 inch / 305×305×605 mm), 0.01 mm Layer Height, Camera / HEPA Air Filtration, Diverse Filament Compatibility (Up to 300°C), 32 Bit Motion Control Board, 7-inch Touch Screen, Resume Print after Power Loss or Filament Outage, Wireless Compatibility</p> <p>Operational area – Machine Size (W×D×H): 24.4×23.2×43.5 in / 620×590×1105 mm</p> <p>Link of the user manual - https://www.raise3d.com/products/pro2-plus-3d-printer/</p>
6	Automatic Desktop Milling Machine	<p>Brand - Roland</p> <p>Model – Modela MDX 50</p> <p>Specification - The MDX-50 benchtop CNC mill combines precise, automated milling and unmatched ease-of-use. An ideal solution for short-runs and prototypes, the MDX-50 reduces operation time and simplifies production so users of all abilities can mill functional parts with incredible quality on a wide range of materials.</p> <p>Operational area – Width X Depth x Height: 29.92 × 35.43 × 28.82 in (760 × 900 × 732 mm)</p> <p>Link of the user manual - https://www.rolanddga.com/products/3d/mdx-50-benchtop-cnc-mill#specs</p>

Section		
Metalworking Facility		
Sr. No.	Equipment Name	Equipment detail
7	Laser Cutter	<p>Brand – SIL</p> <p>Model – AccuCut 1325</p> <p>Laser Type- CO2 Laser Tube</p> <p>Specification – SIL laser engraving machine is versatile & finds application in signage, indoor & outdoor advertisement, art & craft, gift, shoes, toys, garments, model cutting, papers & packaging, wood & MDF cutting industry, interior, decorators and many more. SIL built laser engraver which is engineered & manufactured in India.</p>

		<p>Operational area – Working Area: 1300x2500mm</p> <p>Link of the user manual - https://silasers.com/laser-engraving-and-cutting-machine/</p> <p>Materials- Acrylic, MDF, PVC, Glass, wood etc</p>
8	Lathe Machine (Medium Duty Manual)	<p>Brand - BALAJI</p> <p>Model - VGL – 2, 165 Series</p> <p>Specification - Geared Head Light Duty Lathe Machine, head stock spindle are made by alloy steel & precision grinding, all rotating parts are balanced, head stock is very rigid & structural standard design, easy Maintenance gear box design. No. of Spindle Speed: 8, Spindle Speeds Range: 40 – 1200 R.P.M, Range of Longitudinal Feeds: 0.066 to 2 m.m. / Rev. of Spindle, Range of Transverse Feeds: 0.0165 to 0.50 m.m. / Rev. of Spindle, Lead Screw Diameter / Pitch: 25.4 m.m. / 4 TPI, Suitable Electrical HP: 1 HP. length of Bed: 1370 m.m.(4’ – 6’), 1600 m.m. (5’ – 3’), 1825 m.m. (6’); Admit Between Centre: 660 mm x 890 mm x 1200 mm</p> <p>Operations – Facing, Boring, Filleting, Chamfering, Cut off and parting</p> <p>Link of the user manual - https://www.balajilathe.com/geared-head-light-duty-lathe-machine/</p> <p>Materials- Cast iron, Aluminum, Stainless steel</p>

Section		Power Tool
Sr. No.	Equipment Name	Equipment detail
9	Powerpack (Hydraulic)	<p>Brand – Adithya Engg Co</p> <p>Model – Universal</p> <p>Specification – 1HP, 3Phase</p>
10	Drilling Machine	Brand - Makita
11	Heavy Duty Table Saw	<p>Brand - Bosch</p> <p>Model - GTS 10 J</p> <p>Specification - Table Size: 642 x 634 mm, No - Load Speed : 3650 RPM, Saw Blade Diameter : 254 mm, Rated Input Power : 1800 W</p> <p>Operational area – Cutting</p> <p>Link of the user manual – https://media.bosch-pt.co.in/binary/ocsmedia/optimized/full/o342673v21_160992A5P7_202009.pdf</p> <p>Materials - laminated MDF, acrylic sheet and multiwood, Wood</p>
12	Compressor set with Electric Motor (Pneumatic)	<p>Brand - FERM</p> <p>Model – CRM1049</p> <p>Specification – Portable compressor 1100W, Max 8Bar, 6.3 CFM, with manometer, blow gun nozzle and 3 inflation adapters</p>
13	Cordless Drill/Screwdriver	<p>Brand - BOSCH</p> <p>Model - GSR - 180 – LI</p> <p>Materials- Wood, Steel, Plastic</p>
14	Li Ion Battery Pack	<p>Brand - Amptek</p> <p>Specification- 51.2V, 100Ah, LiFePO4 Battery</p>

Section	Design Software
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Sr. No.	Software	Software detail
15	PCB Design Software	<p>Brand - Altium</p> <p>Model – Altium Designer 365</p> <p>Specification – It has the functionalities for routing, software design, 3D modeling, and supply chain innovation, with the end goal of making electronics design more efficient, powerful and effective for engineers and PCB designers everywhere.</p> <p>License - Single user on-demand commercial license</p>

Section	Measuring Instruments	
Sr. No.	Equipment Name	
16	Screw Gauge	<p>Brand - INSIZE</p> <p>Specification - Measurement range 0-25mm / 0-1", Accuracy $\pm 2 \mu\text{m}$, Resolution 0.001mm/0.00005"</p>
17	Height Gauge	<p>Brand - INSIZE</p> <p>Specification - Measurement range 0-300mm/0-12", Accuracy $\pm 0.04\text{mm}$, Resolution 0.01mm/0.0005"</p>
18	Electronic Caliper	<p>Brand - INSIZE</p> <p>Specification - Measurement range 0 to 300 mm, Resolution 0.0005"/0.01mm, Digital Display</p>
19	Digital Multimeter 2 Nos	<p>Brand – Fluke</p> <p>Model - 101</p> <p>Specification - Voltage: DC: 600 volts; AC: 600 volts; DC Accuracy: $\pm 0.5\%$ + 3 digit; AC Accuracy: $\pm 1\%$ + 3-digit, Resistance: 40 M ohm; Resistance Accuracy: $\pm 1.5\%$ + 3-digit, Capacitance: 1000 μF</p>