

Prayas Centre Name Research Innovation Incubation Design Laboratory Foundation

City Mumbai

State Maharashtra

Fablab Page Link <https://riidl.org/fablab>

Equipment available at Riidl DST PRAYAS Shala

Section		Electronic/Prototyping Facility
Sr. No.	Equipment Name	Equipment detail
1	3D printer	<p>Brand - Fracktal Works Model - Julia Extended - Fused Deposition Modeling (FDM) Specification - 3D Printer Technology, Make Fracktal Works, Model No. Julia Extended - Fused Deposition Modeling (FDM) "Print Head Direct Drive Extruder with Swappable Nozzles" "Build Volume: 200mm x 200mm x 200mm 8000 cc OR/BOTH 250mm x 250mm x 300mm 1875 Operational area – Product development, Manufacturing, End-use parts, Architecture, Education Material support - PLA, ABS Filament Link of the user manual - https://5.imimg.com/data5/BK/ID/TH/SELLER-20503702/3d-printer-julia-advanced.pdf</p>
2	3D Scanner	<p>Brand - Shining 3D Model - Einscan Pro HD Specification - Scan Accuracy-up to 0.045 mm Volumetric Accuracy*-0.3 mm/m (Markers Alignment) Scan Speed-10 frames/s; 3,000,000 points/s Point Distance-0.2 mm-3 mm Operational area – Product development, Manufacturing, End-use parts, Architecture Link of the user manual - https://www.manualslib.com/manual/2093417/Shining-3d-Einscan-Pro-Hd.html</p>
3	Laser cutter	<p>Brand - Silaser Model - 1290 (Double Head) Specification - Laser Tube & Power Supply Double Head Type-Double Head Working Area-1200 x 900 mm Laser Type-Co2 Glass Tube Laser Power-100 Watt EFR Original Wavelength-10.6 μm Work Environment-Temp:0 C ~ 450C. Humidity:5% ~ 95% Supply Voltage-AC 220 V ±10 Operational area – Product development, Manufacturing, End-use parts, Architecture Link of the user manual - https://www.peddy.cz/data-central/files/1290manual.pdf</p>
4	Fiber Laser Marking Machine	<p>Brand - Silaser Model - F-20 Accuwrite</p>

		<p>Specification - Laser Power-IPG_PULSED FIBER LASER 20 WATT Orignal Laser Source-Fiber Laser Wavelength-1064 ±3 nm Beam Quality-<1.2 (M2) Pulse Repetition Rate-20 - 400KHz Power Stability-<±1% Working Area-150x150mm Max marking Depth-1.2mm Max marking</p> <p>Operational area – Product development, Manufacturing, End-use parts, Architecture</p> <p>Link of the user manual - https://manuals.plus/m/1d53f6ca3b4c82e8f6e48b8e19a4607f06de6b021b098765ffd738f6f38125b9_optim.pdf</p>
5	Vaccum forming machine	<p>Brand - Pdb Engineer</p> <p>Model - V23</p> <p>Specification - Vacuum Forming Machine: Forming area size = 24 " X 24 ", Vacuum pump 2 HP, Tube heater . Sliding system, Pneumatic : Hand liver valve, Manually operated valve, Vacuum tank, Cooling fan, Power 3 phase 415 volt, MS body powder coated</p> <p>Operational area – Product development, Manufacturing, End-use parts, Architecture</p> <p>Link of the user manual -</p>
6	PCB Milling	<p>Brand - LPKF</p> <p>Model - ProtoMat E44</p> <p>Specification - Circuit board plotter for the production of prototype PCB's, working area 229x305x5mm, 100-240V, 50-60Hz, 120W high speed spindle motor, adjustable 10.000 to 40.000 rpm, camera supported fiduci</p> <p>Operational area – Product development, Manufacturing, End-use parts, Architecture</p> <p>Link of the user manual - https://www.kth.se/polopoly_fs/1.973536.1586243173!/LPKF_E44_guide.pdf</p>
7	Stabilizer	<p>Brand - Power gun</p> <p>Model - D1407</p> <p>Specification - Servo Control Voltage Stabilizer of 7.5 KVA Capacity, (1Ø -1Ø) Type Servo Control Type • Capacity 7.5 KVA • Input Voltage 170 - 270 Volts • Duty Cycle Continuous • Input Frequency 50 Hz • Output Voltage 230 V • Regulation + 1 % • Sensitivity</p> <p>Operational area – Product development, Manufacturing, End-use parts, Architecture</p> <p>Link of the user manual -</p>
8	5 Series MSO Mixed Signal Oscilloscope	<p>Brand - Tektronix</p> <p>Model - MSO54-5-BW- 350</p> <p>Specification - Mixed Signal Oscilloscope; 350Hz bandwidth , (4) Flex Channels , 62.5M record length: 6.25GS/s real time sampling on each ch. ; 500GS/s interpolated sampling , 12 bit hardware ADC , Cursors: Waveform</p> <p>Operational area – Product development, Manufacturing, End-use parts, Architecture</p> <p>Link of the user manual - https://download.tek.com/manual/5-Series-MSO-MSO54-MSO56-MSO58-MSO58LP-Printable-Help_EN-US_077130301.pdf</p>

Section		Softwares
Sr. No.	Equipment Name	Equipment detail
9	Adobe Creative cloud	Brand - Adobe Model - Creative Cloud for teams All Apps Specification - Creative Cloud for teams All Apps Operational area – Product development, Manufacturing, End-use parts, Architecture. Link of the user manual - https://helpx.adobe.com/in/creative-cloud/user-guide.html
10	corel draw	Brand - Corel Model - CorelDRAW Graphics Suite SU 365-Day Specification - CorelDRAW Graphics Suite SU 365-Day Operational area – Product development, Manufacturing, End-use parts, Architecture. Link of the user manual - http://product.corel.com/help/CorelDRAW/540111148/CorelDRAW-en/CorelDRAW-2021.pdf

Section		Power Tool
Sr. No.	Equipment Name	Equipment detail
11	Drill set	Brand - Bosch Model - GSB 10 RE KIT, Power input 500W -06012161F
12	Circular Saw	Brand - Bosch Model - GKS 140
13	Belt sander	Brand - Bosch Model - GEX 125-1 AE
14	Drill machine	Brand - Bosch Model - GSB 501
15	Heat Gun	Brand - Bosch Model - GHG 180
16	Sander	Brand - FERM Model - BGM 1022
17	Glue Gun	Brand - Dremel Model - GLUE GUN 940
18	Mitre saw	Brand - Bosch Model - GCM 10MX
19	Table saw	Brand - Bosch Model - GTS 10
20	Dremel Set	Brand - Dremel Model - 4250-35
21	Handtool Router	Brand - Bosch Model - GOF 130 Professional Handtool Router
22	Planner	Brand - Dewalt Model - DW733-QS- 12.5 Portable planner 317mm

Section		Supply & measuring equipment	
Sr. No.	Equipment Name	Equipment detail	
23	Measuring tape 100 ft	Brand - Freemans Model - FO100 Specification - Fiber glass measuring Tape 100m x13mm- open reel	
24	Laser measuring tap	Brand - Bosch Model - GLM 500 Specification - Measurement time, typical < 0.5 s Laser diode- 635 nm, < 1 mW Measurement range - 0.05 – 50.00 m , Laser class-2 , Measurement accuracy, typical - ± 1.5 mm* (*plus use-dependent deviation) Measurement range of incline measurement 0 – 360° (4 x 90°) Measuring accuracy (typical)- $\pm 0.2^{\circ}$ * (*plus use-dependent deviation) Measurement time, max.4 s Power supply- 2 x 1.5 V LR03 (AAA) Automatic deactivation- 5 min Weight, approx. - 0.1 kg Units of measurement- m/cm, ft/inch Memory capacity (values) -20 Battery lifetime, individual measurements, approx.-10,000 Battery lifetime, operating time, approx.2.5 h Dust and splash protection IP 54 Tripod thread - 1/4" Laser colour-Red Measuring range, up to50 m	
25	Fluke Multimeter	Brand - Fluke Model - model no. 179 Specification - 1000V AC/DC; 10A AC/DC (with test leads and current jacks); resistance to 50 M Ω ; capacitance to 10,000 μ F, frequency to 100 kHz; temperature from -40 °C to 400 °C Robust, fast and accurate with manual and automatic ranging, Display Hold, Auto Hold, and Min/Max-Average recording Backlit digital display, analog bar graph, and built-in temperature measurements with included thermocouple.	
26	Benchtop Power Supply	Brand - Keysight Model - EDU36311A Specification - DC power supply, triple-output, 6 V, 5 A and 2 x 30 V, 1 A, 90 W: LAN, USB	
27	Function Generator - AFG2021	Brand - Tektronix Model - AFG31021 Test Instruments Arbitrary Function Generator Specification - 1uHz to 25MHz single Out put Arbitrary Function Generator ., Built-in waveforms include sine, square, ramp, pulse, noise, and other frequently used waveforms	
28	Third Hand (PCB Holding Instrument)	Brand - RS PRO Model - 608-391E Specification - Helping Hands magnification & Sol Iron Holder, Magnification \emptyset 60 mm, 7.5D(3X), Base OAL 55 X 55 X 35 mm	

Section		Hand tools	
Sr. No.	Equipment Name	Sr. No.	Equipment Name
29	44 Drawer Storage Cabinets	32	Consumer Electronics Repair Kit
30	Wrench Set/Spanner set	33	safety equipments

31	C clamp set	34	
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Section	Measuring Instruments	
Sr. No.	Equipment Name	
35		
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Section	BioLab Facility	
Sr. No.	Equipment Name	Equipment detail
38		Brand - Model - Specification -
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