



Prayas Centre Name: **SPMVV Society for Innovation Incubation and Entrepreneurship-Technology Business Incubator (SSIIE-TBI)**

City : Tirupati

State : Andhra Pradesh

Fab lab Page Link : <https://spmvv-tbi.in/>

### Equipment available at SSIIE-TBI DST PRAYAS Shala

Section		Electronic/Prototyping Facility
Sr. No.	Equipment Name	Equipment detail
1	3D Printer	<b>Brand</b> – CreatBot 3D Printer <b>Model</b> – F430 <b>Specification</b> – Build Volume: 400*300*300; Max. Layer Resolutions:0.02mm; Accuracy: X,Y, Z axis 0.05mm; Travel: Speed 200mm/s; Materials ABS, PLA, TPU, PETG, HIPS, PVA, PA, PC, Carbon Fibre, PEEK; Fila. Diameter: 1.75mm; Software: Creat Ware Multi-language; File Format: STL, OBJ, GCode, Amf. <b>Usage:</b> Prototyping Facility is used for high-precision fabrication of prototypes and functional parts using engineering-grade materials, enabling product development, testing, validation, and small-scale manufacturing applications. <b>Link of the user manual -</b> <a href="https://www.creatbot.com/downloads/CreatBot_User_Manual_V7.4_F430_en.pdf">https://www.creatbot.com/downloads/CreatBot_User_Manual_V7.4_F430_en.pdf</a>
2	3D Scanner	<b>Brand</b> - SHINING 3D <b>Model</b> – Einsean SEV2 <b>Specification</b> – Scan Mode – Handheld HD Scan/Handheld Rapid Scan; Scan Volume – 400 mm; Work Distance – 400 mm; Software support – S3D Scanning Software; Operational area – 800 mm; Output formats - OBJ, STL, ASC, PLY, 3MF. <b>Usage:</b> A 3D Scanner is used to capture precise physical object dimensions and convert them into digital models for design, reverse engineering, quality inspection, and rapid prototyping applications
3	PCB Milling Machine	<b>Brand</b> - Sri Vignan Technologies <b>Model</b> - 3030 <b>Specification</b> – Operational area: X Axis – 140-400 mm, Y Axis – 200-400 mm, Z Axis – 40-50 mm; Spindle Speed – 11000-40000 rpm; File Support – Gerber, JPG, Pdf, Gcode; PCB Software Support – Gerber; Material Support – Copper clad. <b>Usage:</b> It is used to fabricate printed circuit boards by precisely removing copper layers, enabling rapid prototyping, circuit design testing, and small-scale production without chemical etching processes.
4	Vinyl Plotter	<b>Brand</b> - Sri Vignan Technologies <b>Model:</b> SP-721A <b>Specification</b> - Working Area: 1350x1260 mm; Speed:20 – 1200 mm/sec; Applicable Software: Sign-master, Art-cut, CorelDraw, Flexi Sign-cut, Graph-Cut;

		<p>Materials Support: Vinyl Roll, Paper, Stickers.</p> <p><b>Usage:</b> Vinyl Plotter is used for precision cutting of vinyl sheets to create stickers, decals, labels, signage, and design patterns for branding, advertising, and prototyping application.</p>
<b>Section</b>	<b>Electronics</b>	
<b>Sr. No.</b>	<b>Equipment Name</b>	<b>Equipment detail</b>
5	Digital High-end Oscilloscope	<p><b>Brand</b> - RIGOL  <b>Model</b> – DHO 914  <b>Specification</b> – Bandwidth – 250-350 MHz; Sampling Rate – 1-2 Gsa/sec; Channel – 2-4  <b>Usage:</b> A High-end Oscilloscope is used to analyze and visualize complex electrical signals with high accuracy, supporting advanced debugging, signal integrity testing, circuit design, and high-frequency measurement applications.</p>

<b>Section</b>	<b>Metal Working Facility</b>	
<b>Sr. No.</b>	<b>Equipment Name</b>	<b>Equipment detail</b>
6	Fiber Laser Cutting Machine	<p><b>Brand</b> – KMR  <b>Model</b> – KMR15KWB  <b>Specifications</b> – Laser power – 1500 watts; Cutting Area – 3000x1500 mm; Fiber Laser Generator Brand – MAX Photonics; Compatible Software – CorelDraw, Auto CAD, Photoshop; Graphic Format – LXD/DXF/CDR/PLT/AI/Gerber/DWG/SVG; Materials – Stainless Steel/Carbon Steel/Galvanized Steel/Iron.  <b>Usage:</b> Used for high-speed, high-precision cutting of metals and other materials, enabling fabrication of complex shapes, components, and parts for industrial, prototyping, and manufacturing applications.</p>
7	Fiber Laser Engraving Machine	<p><b>Brand</b> – KMR  <b>Model</b> – KMRFB20  <b>Specifications</b> – Laser power – 50 watts; Working Area – 110x150 mm; Engraving Speed – 10,000 mm/sec; Compatible Software – CorelDraw, Auto CAD, Photoshop; Graphic Format – BMP/JPG/PSD/CDR/PLT/AI/DXF/DWG; Materials – All Metals and Hard plastic.  <b>Usage:</b> Used for precise engraving and marking on metal and non-metal surfaces to create logos, text, serial numbers, and designs for identification, branding, and customization purposes.</p>

Section		Measuring Instruments
Sr. No.	Equipment Name	
8	<p>Micro Pipette</p> <p><b>Brand – Eppendorf</b></p> <p><b>Model:</b> Research plus</p> <p><b>Specifications –</b></p> <p>Volume Range -100 – 1000 µL, &amp; 0.5-10 µL Ergonomics- Lightweight, Channel Type-Single-channel</p> <p>Tip Type-Disposable plastic tips</p> <p><b>Usage:</b> It is used to accurately measure and transfer very small volumes of liquids in laboratories, supporting precise sample preparation, chemical analysis, and biological experiments in research and pharmaceutical applications.</p>	

Section		Bio-Lab Facility
Sr. No.	Equipment Name	Equipment detail
9	Rapid Dryer	<p><b>Brand – Cronimach</b></p> <p><b>Model:</b> CRO FB 0173</p> <p><b>Specification –</b> Material of Contraction (MOC): Contact part SS316&amp; Glass, Non-Contact partSS304/Aluminium; Material Feed size: &gt;100µm; Container Volume – 6 Lit.</p> <p><b>Usage:</b> It is remove moisture from granules or powders, improving stability, reducing processing time, and ensuring uniform drying before further manufacturing steps.</p>
10	Tablets Mini Press	<p><b>Brand - Cronimach</b></p> <p><b>Model:</b> CRO TP 108</p> <p><b>Specification –</b> Number of Stations – 12(4+4+4); Tooling – D+B+BB; Tablet diameter – 23/15/11 mm; Max. compression – 6 tons; Tablets/Hr – 7680/11520</p> <p><b>Usage:</b> It is used to compress powders into small tablets for formulation development, testing, and small-scale production, ensuring uniform weight, hardness, and quality</p>
11	Multipurpose Equipment Base	<p><b>Brand - Kalweka</b></p> <p><b>Model –</b> HD – 410AC</p> <p><b>Specification –</b> Dimension – 550x250x470 mm; Speed – upto 460 rpm; Main Drive – Horizontal drive type HD 410 AC</p> <p><b>Usage:</b> It is used to support and integrate various attachments like mixers, granulators, and dryers, enabling flexible, efficient operation and space optimization in pharmaceutical product development.</p>
12	Dry Granulator	<p><b>Brand - Kalweka</b></p> <p><b>Model –</b> DGS-GMP</p> <p><b>Specification –</b> Working Capacity – 15 kg/Hr; Granulation – 45% - 16 mesh, 25% - 24 mesh, 10% - 17 mesh, 20% powder</p> <p><b>Usage:</b> It is used to convert powder into granules without liquid addition, improving flowability and compressibility in pharmaceutical manufacturing, especially for moisture- or heat-sensitive materials.</p>

13	Ointment Filling	<p><b>Brand</b> – Kalweka  <b>Model</b> – FMO  <b>Specification</b> - Capacity (max) – 1000-1200 fills/Hr; Filling range – 50-200 ml; Nozzle diameter – 2mm, 4mm &amp; 8mm  <b>Usage:</b> Ointment Filling Machine is used to accurately fill creams, gels, or ointments into tubes or containers, ensuring uniform quantity, hygienic handling, and efficient packaging in pharmaceutical manufacturing processes.</p>
14	Planetary Mixer	<p><b>Brand</b> - Kalweka  <b>Model</b> – PMS-GMP  <b>Specification</b> – Working Capacity – 3 to 3.5 Lit.; Operating Capacity – 5 Lit.  <b>Usage:</b> It is used to blend, mix, and homogenize powders, creams, and viscous materials, ensuring uniform consistency and quality</p>
15	Triple Roller Mill	<p><b>Brand</b> - IRM  <b>Specification</b> – Working Capacity – 2 to 12 kg/Hr; Dimension – 300x260x170 mm, Electrical Supply-220 V / 50 Hz; Number of Rollers 3 ; Gap Adjustment : Manual handwheel control  <b>Usage</b> A Triple Roller Mill is used to finely grind and homogenize viscous materials, ensuring uniform particle size distribution and smooth consistency for improved quality in pharmaceutical and cosmetic formulations</p>
16	Homogenizer	<p><b>Brand</b> - Kalweka  <b>Model</b> – HMG-GMP  <b>Specification</b> – Working Capacity – 15 Lit/Hr; Attachments – Heat able Funnel, Filter and Circulator  <b>Usage:</b> A Homogenizer is used to uniformly mix, emulsify, and reduce particle size in liquids, ensuring stable, consistent formulations and improved quality in pharmaceutical, food, and cosmetic applications.</p>
17	Oscillating Granulator	<p><b>Brand</b> - Kalweka  <b>Model</b> – WGS - GMP  <b>Specification</b> – Working Capacity – 25 kg/Hr; Mesh Size – 0.315, 0.63, 0.8, 1.0, 1.25, 1.6, 2.0, 2.5, 3.15  <b>Usage:</b> converts moist, sticky powder into uniform granules and sizes dry compressed pellets before tablet compression or capsule filling..</p>
18	Sieve Shaker	<p><b>Brand</b> - Kalweka  <b>Model</b> – MSS - GMP  <b>Specification</b> – Working Capacity – 10 Kg/Hr; Dimension – 230x300x520 mm  <b>Usage:</b> It is used to separate and classify particles based on size by vibrating stacked sieves, ensuring uniform particle distribution for quality control and formulation consistency in pharmaceutical applications</p>
19	Universal Gearing	<p><b>Brand</b> - Kalweka  <b>Model</b> – UD-GMP  <b>Specification</b> – Speed – 60 RPM; Gearing Unit Ratio – 7.1:1 RPM;  The Gear is common to the following attachments:  Miniature Ball Mill, Coating Pan, Cube Mixer, Polishing Drum, Double Cone Mixer, Pelletizer.  <b>Usage:</b> It is used to control speed and torque in mixers, granulators, and tablet machines, ensuring precise, consistent, and efficient production processes.</p>
20	Coating Pan	<p><b>Brand</b> - Kalweka</p>

		<p><b>Model</b> – CPS -GMP</p> <p><b>Specification</b> – Gross Capacity – 9.5 Lit.; Working Capacity – 2.5 Lit. Power Supply - 220 V / 50 Hz, Pan Material Stainless Steel (SS 304 / SS 316); Accessories- Infra Red Radiator 150w.</p> <p><b>Usage:</b> It is used to apply uniform coatings on tablets or pellets, enhancing appearance, taste masking, stability, and controlled drug release in pharmaceutical manufacturing processes</p>
21	Micro centrifuge	<p><b>Brand</b> - REMI</p> <p><b>Model</b> - CM-12 PLUS</p> <p><b>Specification</b> - Max. Speed (rpm) - 16,000; Max. Tube Size(ml) – 5; Max. Capacity (ml) – 40</p> <p><b>Usage:</b> A Micro Centrifuge is used to rapidly separate small-volume liquid samples based on density by high-speed spinning, enabling efficient sample preparation, DNA/RNA isolation, and biochemical analysis in laboratories.</p>