

Prayas Centre Name Foundation for Technology and Business Incubation, NIT Rourkela

City Rourkela

State Odisha

Fablab Page Link <https://www.ftbi-nitrkl.org/fab-lab>

Equipment available at FTBI, NIT ROURKELA DST PRAYAS Shala

Section		Electronic/Prototyping Facility
Sr. No.	Equipment Name	Equipment detail
1	<u>UV PRINTER</u>	<p>Brand - OMAJIC Model – UV-6090</p> <p>Specification - Print Area: 600 × 900 mm, Resolution: Up to 720 × 1800 dpi, Ink: CMYK + White + Varnish, Printheads: 3 × Epson I3200-U1, Max Media Thickness: 130 mm, Materials: Acrylic, glass, metal, wood, leather, phone cases, Curing System: LED UV lamp, Software: Photoprint / RIP, Print Speed: 8–12 m²/h, Power Supply: AC 220V, Applications: Personalized items, signage, promotional products.</p> <p>Operational area – OMAJIC UV6090 refers to the types of materials and objects it can print on, which include acrylic, glass, metal, wood, leather, and phone cases, making it suitable for personalized items, signage, and promotional products.</p> <p>Link of the user manual - https://www.ftbi-nitrkl.org/fab-lab</p>
2	<u>3D PRINTER</u>	<p>Brand – MAKE 3D.IN Model – Pratham 5.0</p> <p>Specification - Build Volume 500×500×500 mm, FDM technology, Layer 80–600 microns, Print Speed 120–150 mm/s, Direct Drive Extruder up to 280°C, Heated Aluminum Bed 120°C, All-metal frame, Connectivity Wi-Fi/SD/USB, 7-inch Touchscreen, Auto Bed Leveling & Filament Sensor, Supports ABS/PLA/TPU/PETG/ASA/HIPS/Composites, Compatible with Simplify3D/Cura, STL/GCODE files, Size 980×820×990 mm, Weight 80 kg, Power 230V AC, 320W, 12-month warranty with lifetime support.</p> <p>Operational area – Prototyping, educational projects, small-batch industrial production, tooling, and hobbyist applications, capable of printing on ABS, PLA, TPU, PETG, ASA, HIPS, and composite filaments for functional parts, models, and customized designs.</p> <p>Link of the user manual -https://www.ftbi-nitrkl.org/fab-lab</p>
3	<u>MOULDING MACHINE</u>	<p>Brand - MODERN Model – MODERN MMH-50</p> <p>Specification - 50 T clamping capacity, mold size up to 500 × 500 mm, stroke length 150–200 mm, operating pressure 150–200 bar, power supply 220–240 V AC, 3 kW, cycle time 20–60 seconds depending on material, industrial-grade steel frame, manual or semi-automatic control, weight 600–800 kg, suitable for small to medium-scale molding of thermoplastics, resins, and similar materials</p> <p>Operational area – Small to medium-scale molding production, suitable for thermoplastics, resins, and other moldable materials, used in workshops, educational prototyping, and general industrial molding applications</p> <p>Link of the user manual - https://www.ftbi-nitrkl.org/fab-lab</p>

4	<u>Automated high pressing Machine</u>	<p>Brand - Apstronics Technologies Pvt. Ltd. (FTBI) Model - Sanitary napkin making machine Specification - Automated hydraulic press for sanitary pad production, pressing capacity 8T, pressing area 300 × 150 mm, cycle time 2–5 seconds per pad, power supply 220 V AC, 3.5 kW, PLC/automatic control, industrial-grade steel frame, automatic or semi-automatic operation, weight 600 kg, production output 80 pads per minute Operational area – Small to medium-scale sanitary pad production, suitable for pressing absorbent cores, top sheets, and back sheets, used in workshops, small-scale manufacturing units, and educational prototyping setups. Link of the user manual -https://www.ftbi-nitrkl.org/fab-lab</p>
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Section		
Metalworking Facility		
Sr. No.	Equipment Name	Equipment detail
5	AUTOMATIC CNC MILLING MACHINE	<p>Brand - Bharat Fritz Wernar Ltd. (BFW) Model - CHANDRA + , CH+P3-008 Specification – Table Size : 1060 x 315 mm Max. Load in table (std.) : 300kg X – Axis travel : 800mm Y – Axis travel : 350mm Z – Axis travel : 380mm No. of Tools : Spindle nose face to table top : 75 – 455 mm Spindle taper : BT- 40 Spindle speed (std.) : 6000 rpm Total Connected load : 10 KVA Operational area –Face Milling, End Milling, Side & Face Milling, Drilling & Tapping, Contour Milling, Pocket Milling, Chamfering, and Profile Milling. Link of the user manual - https://www.ftbi-nitrkl.org/fab-lab</p>
6	CNC LASER CUTTING MACHINE	<p>Brand - Aaradhana Technology Systems Model – AR-3015 Specification – Cutting Area: 3000 × 1500 mm, Laser Power: 1–20 kW, Max Speed: 140 m/min, Accuracy: ±0.02 mm, Cooling: Water, Drive: Bilateral with sprocket chain, Control: Cypcut. Operational area – Sheet metal, stainless steel, carbon steel, aluminum, brass, copper cutting with precision contour and high-speed fabrication. Link of the user manual - https://www.ftbi-nitrkl.org/fab-lab</p>

Section		
Supply & measuring equipment		
Sr. No.	Equipment Name	Equipment detail
7	PACKAGING MACHINE -1	<p>Brand – JJR AGRICULTURE & Packaging system</p> <p>Model - GF-5000</p> <p>Specification –</p> <p>Model: GF-5000</p> <p>Filling Capacity: Up to 5000 grams</p> <p>Operation: Semi-automatic</p> <p>Material Compatibility: Granular materials (e.g., seeds, pulses, tea)</p> <p>Construction: Stainless steel frame</p> <p>Power Supply: 220v</p> <p>Dimensions: 800 × 500 × 1200 mm</p> <p>Weight: 120–150 kg</p>
8	PACKAGING MACHINE -2	<p>Brand – JJR AGRICULTURE & Packaging system</p> <p>Model – GFK-280</p> <p>Specification –</p> <p>Model: GFK-280</p> <p>Operation: Electric-powered, semi-automatic or automatic</p> <p>Filling Volume: Adjustable (50 ml – 1000 ml, depending on container size)</p> <p>Filling Speed: 20–50 bottles per minute (depending on liquid viscosity)</p> <p>Material Compatibility: Water, juices, oils, syrups, and other low- to medium-viscosity liquids</p> <p>Construction: Stainless steel frame and contact parts</p> <p>Power Supply: 220 V AC, 50 Hz, 1–2 kW</p> <p>Control System: PLC or push-button operation</p> <p>Dimensions (L×W×H): 900 × 500 × 1200 mm (approx.)</p> <p>Weight: 150–180 kg</p> <p>Operational Use: Small to medium-scale liquid packaging units</p>