

**DEPARTMENT OF MECHANICAL
ENGINEERING, VJTI, MUMBAI**

CSR Proposal



| SR · N O. | Components | Description (Technical Specification) | Appro. Price | Qua ntit y |
|--------------------|--|---|--------------------------|------------------|
| 1. | CNC 5-Axis vertical machining centre with hybrid manufacturing | Spindle Speed up to 40,000 RPM, 180mm travel in the X axis, 300mm travel in the Y axis, and 150mm travel in the Z axis, 15-tool automatic tool changer | ₹11,00,000 | 1 |
| 2. | CNC Turn Mill centre for production | Hydraulic Chuck Size - 8" Dia. of Spindle Bore - 65 mm Spindle Speed Range - 50-3000 r/min | ₹17,00,000 | 1 |
| 3. | Mobile COBOT system for CNC milling/Turning system | | 1,00,000/ | 1 |
| 4. | CNC simulator for CNC mill and CNC lathe | Simulates turning, milling, plasma cutting, and 3D printing. Includes a built-in CAD/CAM system called SimCam. | ₹40,000 Per simulator | 2 |
| 5. | High precision universal cylindrical grinding machine | Max. length ground (OD) / Distance between center (mm) – 500 Center Height (mm) – 135 Dia. Ground (OD) (mm) - 5~200 Dia. Ground (ID) (mm) - 25~100 Max. length ground (ID) (mm) – 12 | ₹15,00,000 | 1 |
| 6. | Precision Surface Grinding Machine (Medium Size) | Number of T-slot - 14×1 mm×n Speed of working table - 18 m/min Wheel size (dia×width×bore) - Φ350×30×127 mm Spindle speeds - 1440 rpm The total power of electric motor - 6.5 kw Cross feed motor of table - 0.06 kw | ₹7,50,000 | 1 |
| 7. | Fast Speed Reusable Wire EDM Machine | Max. cut taper (°/mm) - ±12°/80 Machining accuracy i) Octagon (mm) - ±0.006 ii) Taper (mm) - ±0.015 Max. machining speed (mm ² /mm)- 260 | ₹21,00,000 | 1 |

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| | | Molybdenum wire range (mm) - Ø0.12-2 Rate power – ≤3 Kw Voltage - 3-380/50 V/Hz | | |
| 8. | Additive Manufacturing Desktop 3D Printer for Training | Max Hot End Temperature - 300 Max Speed of Tool Head - 500 mm/s Max Acceleration of Tool Head - 20 m/s ² Electrical Requirements - 100-240 VAC, 50/60 Hz, 1000 W @220 V, 350W@110V | ₹60,000 Per Piece | 4 |
| 9. | Industrial Composite 3D Printer | Process - Composite Fused Filament Fabrication, Continuous Fiber Reinforcement. Temperature Control - Heated chamber reaches up to 60°C ready-state. Materials – Plastic - Onyx®, Onyx FR, Onyx ESD, Nylon White, Nylon White FS - Continuous Fibre - Carbon Fiber, Carbon Fiber FR Print System - Direct-drive print head with two nozzles (one plastic, one fibre), automatic material changeover | ₹50,00,000 | 1 |
| 10. | POWDER BED FUSION-SLS 3D Printer | Build envelope - 150 × 200 × 150 mm Build Volume – 4.5L Max. resolution (XY) – 0.1mm Max. resolution (Z) – 0.08mm Process - Powder Bed Fusion (PBF) Materials - Polymers-Thermoplastics - Polyamides | ₹11,05,000 | 1 |
| 11. | SLA 3D Printer with essential accessories | Frame material - Acrylic plate Nozzle quantity - Single Nozzle Diameter - 0.4mm Nozzle temperature - 170-275 Degree Product forming size - 220 x 220 x 240mm Memory card offline print - SD card LCD Screen - Yes Print Speed - 40 – 120mm/s Supporting material - ABS, PLA Material diameter - 1.75mm Language - English File format - G-code, OBJ, STL | ₹2,00,000 Per Piece | 2 |
| 12. | Metal Powder Bed Fusion Machine | Technology - Atomic Diffusion Additive Manufacturing (ADAM) Materials - Steels, titanium, copper, Inconel Highlights - Compact and cost-effective, ideal for prototyping and low-volume production. | ₹8,00,000 | 1 |
| 13. | Industrial 3D | Scan Accuracy - up to 0.045 mm | ₹8,00,000 | 1 |

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| | Scanner | Volumetric Accuracy - 0.3 mm/m Scan Speed - 10 frames/s; 3,000,000 points/s Software Include - ExScan Pro, Solid Edge SHINING 3D Edition | | |
| 14. | Digital Data Capturing Device for Training / Skilling | | ₹1,00,000/- | 2 |
| 15. | Automated Storage & Retrieval Systems | Usage/Application – Warehouse Storage Capacity - 500 KG to 5000 KG Material – Mild Steel | ₹20,000 | 1 |
| 16. | PCB Prototyping Machine Setup | Spindle RPM – 12000 Drive System - Stepper Motors Job Material - Aluminium, copper and nickel Stencil Model - PCB bot proto Work area XYZ - 140x200x40 Capable of handling Drilling, Milling & Routing, etc. operations at a rapid traverse of 4000mm/min | ₹3,50,000 | 1 |
| 17. | Software Solutions Under the COE | | ₹3,00,000/- | 1 |
| 18. | Desktop Computer | Brand Processor - Intel CPU No. of cores - Quad-core Graphics Processor - Intel GPU Processor Speed - 3.4 GHz processor Hard Drive Type - Solid State Drive Installed Memory – 8 GB RAM Drive Capacity - 512 GB Storage Monitor Size - 23.8 in screen Operating System - Windows 11 Home Memory Storage Capacity - 512 GB Memory Slots Available - yes | ₹50,000 Per Piece | 15 |
| | | Total Cost | 1,60,75,000/ | |

Total Cost: One Crore Sixty Lakh Seventy-Five Thousand Only