

# CUTTING-EDGE SOLUTIONS FOR REAL-WORLD SUCCESS

**Empowering Education:** Embracing  
tomorrow's capabilities, today





ADVANCING  
EDUCATION,  
EMPOWERING  
FUTURES.

# THE FUTURE OF LEARNING BEGINS HERE

In today's dynamic world, education must evolve beyond traditional boundaries. Institutions need more than machines; they need transformative ecosystems that inspire curiosity, creativity, and confidence. CadMech is the catalyst of this transformation.

***At CadMech, we don't just build machines; we empower dreams.***

---

With cutting-edge, user-friendly technology integrated with IoT, AR/VR, and simulation tools, we are shaping hands-on learning environments that prepare students for a thriving future.

---





# EMPOWERING EDUCATION THROUGH INNOVATION

---

**Bridging the gap between academic aspirations and industry demands since 1997**

---

A pioneer in delivering innovative, high-performance lab equipment, we have built a reputation for delivering smart, reliable, and affordable solutions tailored for engineering colleges, polytechnics, ITIs, IITs, and industries across India. Our in-house R&D, integrated technologies, and customer-first approach make us a trusted partner in educational transformation.

## **Key Milestones:**

- 1997: Founded as V-Ramp Systems
- 2000: Established B.J. Engineering to serve industrial and defense sectors
- 2007: Merged to form CadMech Engineering Pvt. Ltd.
- 2015: Integrated IoT and AR/VR into product designs
- 2020: Recognized as a leading OEM in educational lab solutions across India
- 2025: Featured in Industry Outlook as one of the Top 10 Lab Equipment Manufacturers for Educational Institutes

## **Capabilities & Strengths:**

- 25+ years of expertise in technical education and industrial solutions
- Comprehensive in-house R&D for continuous innovation
- Advanced smart labs with IoT, AR/VR, and simulation panels
- Robust post-sales service support with AMC and faculty training
- Nationwide presence with PAN-India delivery and service network

# “FORGING A LEGACY OF INNOVATION AND TRUST”

From my early days as an engineer, I dreamed of creating solutions that empower education. That vision became CadMech Engineering — a brand built on the belief that education drives progress and every institution deserves advanced, reliable, and affordable tools.

For 25 years, we've grown beyond building machines; we've built lasting partnerships. We understand the challenges - tight budgets, complex procurement, and the need for hands-on Industry 4.0 learning. That's why we design high-performance, user-friendly lab equipment that makes innovation accessible. Innovation drives us. From CNC Trainer

Machines to IoT, AR/VR, and simulation software, we craft immersive learning experiences. But we don't stop there. Our support extends beyond delivery - through faculty training, maintenance, and dedicated service.

At CadMech, we're more than a supplier - we're partners in shaping futures. Every smart lab we install and every solution we tailor brings students closer to their dreams. We're here to turn ambition into achievement and empower the next generation to lead.

---

## MR. PRAKASH SULAKHE

*MD, Electronics Engineer  
MBA, PHD-Management*

---



# Manufacturing & Innovation

Our state-of-the-art manufacturing facility integrates every production stage - from raw material machining to final assembly - under one roof. Strict Quality Management Systems ensure every product is precise, durable, and cost-effective, exceeding industry standards. Renowned for precision, reliability, and consistent performance, our products are trusted by leading engineering colleges in India. Our in-house R&D team, with expertise in mechanical engineering, electronics, embedded systems, and IT engineering, drives continuous innovation. By integrating cutting-edge technologies, we transform traditional lab equipment into smart, interactive learning tools that empower students and faculty.

## Key innovations include:

- Smart Labs: IoT-enabled devices and AR/VR technology for immersive learning.
- Simulation Software: Virtual tools to verify operations, reducing errors and waste.

- User-Friendly Designs: Easy-to-use machines with video guides and simulation panels.
- Flexible Manufacturing Setups: CIM, FMS, and MMS systems offering hands-on smart factory experience.

CadMech customizes solutions to align with university syllabi, industry standards, and future tech trends. Our AICTE and UGC-compliant equipment ensures institutions receive advanced, relevant, and sustainable tools. Beyond product delivery, CadMech provides comprehensive post-sales support, including faculty training, AMC, and ongoing technical assistance, ensuring optimal performance and fostering long-term partnerships.



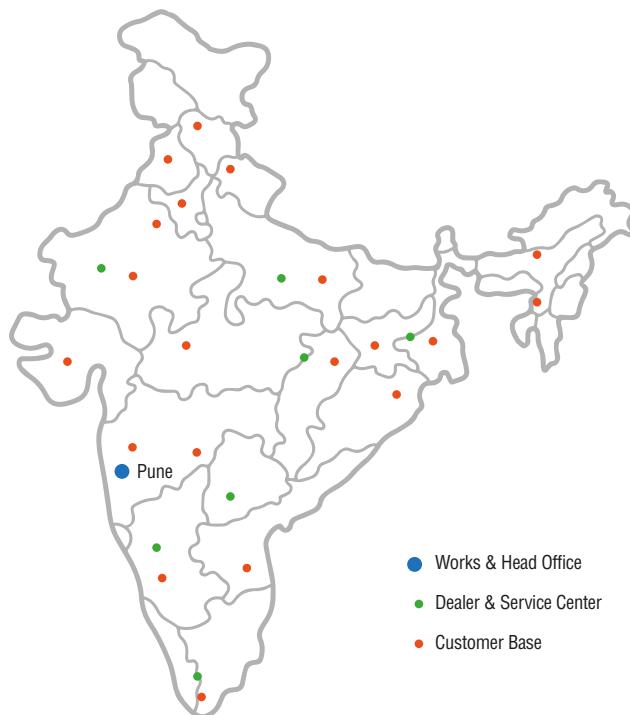
# STRATEGIC LOCATIONS: EMPOWERING EDUCATION ACROSS INDIA

Headquartered in Pune, Maharashtra, CadMech Engineering Pvt. Ltd. leverages its strategic positioning to effectively serve educational institutions and industries nationwide. Pune, renowned as a thriving industrial and educational hub, offers CadMech the advantage of being at the heart of innovation and talent development.

- **Proximity to Leading Institutions:** Situated near top-tier engineering colleges and technical institutes, CadMech fosters close collaboration with academia. This proximity enables the creation of customized educational equipment aligned with evolving curricula and industry needs.
- **Access to Skilled Talent:** Pune's vast pool of engineering and technical professionals fuels CadMech's R&D efforts, driving continuous innovation and enhancement of product offerings.
- **Nationwide Connectivity:** Pune's robust infrastructure and connectivity ensure the smooth distribution and service support of CadMech's products across India, enabling timely delivery and maintenance of educational equipment.

## Pan-India Reach:

- **Extensive Dealer & Service Network:** CadMech's comprehensive network of dealers and service centers ensures rapid response and efficient support in key educational hubs such as Maharashtra, Karnataka, and Tamil Nadu.
- **Strong Market Presence:** By maintaining a solid foothold in states with high educational density, CadMech aligns with its mission to empower technical education nationwide.





# OUR SERVICE PROMISE: UNMATCHED SUPPORT AT EVERY STEP

At CadMech, customer satisfaction is our highest priority. Our service promise is built on reliability, responsiveness, and long-term partnership.

- **Comprehensive Support:** From installation to training and after-sales service, CadMech offers end-to-end solutions to maximize the value of your investment.
- **Annual Maintenance Contracts (AMC):** Proactive maintenance services ensure optimal equipment performance and longevity, minimizing downtime for educational institutions.

- **Customized Training Programs:** Hands-on training for faculty and staff at the time of installation, with periodic refreshers available to ensure seamless equipment operation.
- **24/7 Service Accessibility:** Our dedicated service team is available round-the-clock to address technical issues, ensuring uninterrupted learning experiences.
- **Innovation-Driven Solutions:** Our smart labs, powered by IoT, AR/VR, and simulation technology, are designed not just for today's syllabus but for tomorrow's skills.

---

***CadMech is more than a supplier - we are your lifelong partner in progress, committed to advancing education and empowering futures.***

---

## Products & Solutions

# TRANSFORMING TECHNICAL EDUCATION. ADVANCING LEARNING.

Built to industry standards, our advanced products and solutions empower students at engineering colleges, polytechnics, and training centers with the skills to excel in modern manufacturing and automation.

Our advanced solutions are built to match evolving industrial demands. CNC Lathe and Mill Trainers, CNC Lathe Cum Production Trainers, and the versatile Sine-O-Mill offer students real-world manufacturing experience. CADMech's robotic trainers — 6-Axis Robots, Delta Articulated Robots, and Precision Industrial Robots - immerse students in automation, providing essential skills for tomorrow's smart manufacturing landscape.

We deliver complete smart lab solutions that elevate technical learning. Our Computer Integrated Manufacturing (CIM) setups, Flexible Manufacturing Systems (FMS), and Modular Manufacturing Systems (MMS) bring smart factory concepts to classrooms. Enhanced with

3D simulation, IoT, and AR/VR, these labs offer immersive, hands-on learning while helping institutions cut operational costs. Hydraulic and Pneumatic Trainers and Fab Lab setups further support practical experimentation and innovation.

CADMech's in-house R&D and manufacturing drive every innovation. Our solutions align with academic syllabi and industry standards, ensuring relevance and quality. By combining affordability with advanced technology, we provide future-ready labs that build real-world competencies. Integrated IoT, AR, and VR technologies make our labs dynamic ecosystems of learning and innovation.

Our collaborations with DRDO and Defence units reflect our commitment to advancing indigenous technology. This dedication extends to every client relationship - seamless installations, faculty training, and continuous support.

---

***By combining technological excellence with unwavering support, we help institutions shape successful careers.***

---

# CNC LATHE TRAINER

VLM T 100 | VLM IT 100

## Features

- Rugged Machine with Ground Bed
- 8 Station Programmable Turret
- Industrial Motion Controller
- 3D Material Removal Simulation
- STL Import / Export Facility
- Innovative live View on Screen (Optional)
- Customizable Tool Library
- Customizable STK Design
- Manual Pulse Generator (Optional)
- FMS & CIM Compatibility (Optional)
- Latest Technological Platform for Software
- Interactive CNC Part Programming Software
- Hydraulic Chuck (Optional)
- Auto Door (Optional)



PC Based Controller



Industrial Controller

## Specifications

|                              |   |
|------------------------------|---|
| • X – Axis Travel            | : 150 mm                                    |
| • Z – Axis Travel            | : 200 mm                                    |
| • Chuck Size                 | : 100 mm (Hydraulic chuck ø 135mm optional) |
| • Maximum Turning Diameter   | : 30 mm                                     |
| • Maximum Turning Length     | : 150 mm                                    |
| • Swing Over Cross Slide     | : 80 mm                                     |
| • Spindle Nose Taper         | : MT3                                       |
| • Standard Cutting Tool Size | : 16 x 16 mm                                |
| • Spindle Motor              | : 2 H.P AC/DC Motor (300 - 3000 RPM)        |
| • Resolution                 | : 0.005 mm                                  |
| • Repeatability Automatic    | : $\pm 0.01$ mm                             |
| • Lubrication Points         | : Provided                                  |
| • Interpolation              | : Linear, Circular                          |
| • Programmable Feed Rate     | : 0- 800 mm/Min.                            |
| • Rapid Feed Rate            | : 0- 1200 mm/Min.                           |
| • Control System             | : PC Based / Industrial                     |
| • Turret                     | : 8 Station (Electro - Pneumatic)           |
| • Coolant System             | : 40 Lts. (Programmable)                    |
| • Lubrication                | : Centralized (Programmable)                |
| • Axis Motor                 | : Stepper / Servo Motor                     |
| • Mains Supply               | : 415 V AC, Three Phase                     |
| • Machine Dimensions         | : Approx. 1500 x 900 x 1500 mm              |
| • Total Weight               | : Approx. 900 Kg.                           |



3D Software



Eight Station Turret



Live Screen



MPG

# CNC MILL TRAINER

VMM A 200 | VMM IA 200

## Features

- Rugged Machine with Ground Bed
- 12 Station Programmable ATC
- Programmable Spindle
- Fully Enclosed Working Area
- Innovative live View on Screen
- Manual Pulse Generator (Optional)
- FMS & CIM Compatibility
- Hydro Pneumatic vice (Optional)
- Auto Door (Optional)

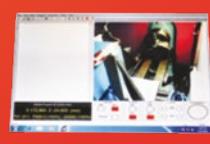


PC Based Controller

Industrial Controller



12 Station ATC



Live Screen

## Specifications

- X – Axis Travel : 250 mm
- Y – Axis Travel : 175 mm
- Z – Axis Travel : 200 mm
- Table Size : 500 x 200 mm
- Spindle Nose to Table Top : 40 - 190 mm
- Spindle to Column : 110 mm
- Spindle Inside Taper : BT 30 / ISO 30
- Maximum Tool Size : Diameter 12 mm, Length 70 mm
- Spindle Motor : 2 H.P AC/DC Motor with 3000 RPM
- Resolution : 0.005 mm
- Repeatability Automatic :  $\pm 0.01$  mm
- Lubrication Points : Provided
- Interpolation Programmable : Linear, Circular
- Feed Rate : 0- 800 mm/Min. (X,Y,Z)
- Rapid Feed Rate : 0- 1200 mm/Min. (X,Y,Z)
- Control System : PC Based / Industrial
- Automatic Tool Changer : 12 Station (Pneumatic) (Geneva mechanism)
- Lubrication : Centralized (Programmable)
- Axis Motor : Stepper / Servo Motor
- Mains Supply : 230 V AC, 1 Phase for Machine and 3 Phase 415 V AC for ATC
- Machine Dimensions : Approx. 1200 x 1200 x 1800 mm
- Total Weight : Approx. 1200 Kg.



3D Software



CNC Mill Spindle



Servo Motor and Drive



MPG

# CNC LATHE CUM PRODUCTION TRAINER

## VTC 135

Fanuc Oi TF Plus/ Siemens Sinumerik 828D

- Control System Features
- 2 axes simultaneous interpolation
- Part program storage & editing
- Constant surface speed control
- Tool nose radius compensation
- Circular interpolation

• Direct drawing dimension programming

- Absolute/ incremental programming
- PCMCIA card and USB slot on front panel
- Backlash compensation
- Graphic simulation
- Electronic handwheel (MPG)
- 10.4" color TFT display

• Run hour display

- Part count
- Turning cycles
- Thread cutting cycle
- Manual data input



Rigid Foundation



Head Stock



Tail Stock



### Specifications

- Chuck dia (mm) : 135
- Max. turning dia (mm) : 180
- Max. turning Length from chuck face (mm) : 270
- Swing over Bed (mm) : 370
- LM Guide width (mm) X / Z : 25/25
- Axis motor torque (mm) X / Z : 4/4
- X axis stroke (mm) : 140
- Z axis stroke (mm) : 280
- Rapid traverse (met /min) : 26
- Ball screw dia x pitch & class (mm) : 25X10 P C3
- Positioning accuracy (mm) : 0.008
- Repeatability (mm) :  $\pm 0.003$
- Spindle nose : A2-4
- Max. Spindle speed (RPM) : 4000
- Max. Bar Capacity (mm) : 25
- Spindle power cont. / 15 min rating Fanuc (kW) : 3.7 / 5.5
- Spindle power cont. / 15 min rating Siemens (kW) : 3.7 / 5.6
- Turret (Pragathi BTP, Cosmos CHT) : BTP 63
- Tool shank cross section (mm): 20 x 20
- Max. boring bar capacity (mm) : 32
- Quill diameter (mm) : 40
- Quill stroke (mm) : 90
- Internal taper : MT3
- Base travel : 160
- Continuous /15 min rating (kVA) : 8 / 10
- Kgs (Approx) : 2100

# SINE-O-MILL

## VMC 300

- AC servo drives
- AC variable speed spindle motor
- Hardened and ground ball-screws
- Centralised automatic lubrication
- Basic coolant system
- Telescopic covers and bellow on Z-axis
- Full machine guard
- Manual pulse generator



### Specifications

|   |                          |
|---|--------------------------|
| • X – Axis                                | : 350 mm                 |
| • Y – Axis                                | : 275 mm                 |
| • Z – Axis                                | : 300 mm                 |
| • Distance from Spindle Nose to Table Top | : 70 - 300 mm            |
| • Traverse Screws                         | : Ball Screw Dia 32 x 10 |
| • Table Size                              | : 550 X 325 mm           |
| • Max. Load on Table                      | : 120 Kgs                |
| • Clamping Area                           | : 450 x 250 mm           |
| • Spindle Bore Taper                      | : BT 40                  |
| • Spindle Speed                           | : 100 - 3000 RPM         |
| • Spindle Motor Power                     | : 5 HP, AC               |
| • Spindle Motor Drive                     | : 5 HP VFD HP            |
| • Rapid Traverse Rate X & Y Axes          | : 8 & 8 m/min            |
| • Rapid Traverse Rate Z Axis              | : 8 m/min                |
| • Cutting Feed Rate X & Y                 | : 1 – 5000 m/min         |
| • Cutting Feed Rate Z                     | : 1 – 5000 m/min         |
| • Controller                              | : SIEMENS 808D Basic     |
| • Motors & Drives X & Y                   | : 4 NM SERVO             |
| • Motors & Drives Z                       | : 7 NM SERVO             |
| • Accuracy                                | : 0.01 mm                |
| • Repeatability                           | : $\pm 0.005$ mm         |
| • Resolution                              | : 0.001 mm               |
| • Min. Input Increment                    | : 0.001 mm               |
| • Front x Side                            | : 1500 x 1700 mm         |
| • Machine Weight (Approx)                 | : 2500 Kg                |
| • Main Supply                             | : 415 VAC, 3 Ph, 50 Hz   |



Industrial Controller



Servo Motor and Drive



12 Station ATC



MPG

# 6 AXIS ROBOT TRAINER

SR 6

- Compact Design For Training Purpose
- Industrial Motion Controller
- Teach Pendant Facility

- Programmable Digital I/O
- Latest Technological Platform for Software
- Interactive Programming Software

- Powerful 3D simulation, Online and Offline
- FMS & CIM Compatibility



3D Software



Gripper



Teach Pendant



## Specifications

- No of axis : 6
- Link 1 : 300 mm
- Link 2 : 300 mm
- Joint actuator : DC Stepper Motor
- Transmission : Timing Belt Drive
- Position feedback : Proximity Switch
- Gripper actuator : Pneumatic
- Weight of robot : 50 Kg.
- Accuracy :  $\pm 0.3$
- Repeatability :  $\pm 0.2$
- Tip Velocity range : 500 mm / min
- Pay load capacity : 2 kg (including griper)
- J1 - Waist :  $\pm 140^\circ$
- J2 - Shoulder :  $-100 - 60^\circ$
- J3 - Elbow :  $-70 + 10^\circ$
- J4 - Wrist rotate :  $\pm 70^\circ$
- J5 - Wrist pitch :  $\pm 35^\circ$
- J6 - Wrist roll :  $\pm 180^\circ$

## External I/O

- 8 Programmable digital inputs
- 8 Programmable digital outputs

# DELTA ARTICULATED ROBOT

## PRECISION INDUSTRIAL ROBOT



| Model                  | DRV70L Series  | DRV90L Series   | DRVA1L Series   | DRVA4L Series  |  |  |
|------------------------|--|-----------------|-----------------|----------------|--|--|
| Number of Axes         |  |                 | 6               |                |  |  |
| Max. Working Range     | 710 mm   | 900 mm          | 1,111 mm        | 1,411 mm       |  |  |
| Max. Payload           |  |                 | 7 kg            |                |  |  |
| Motion Range           | J1   |                 | ±170°           |                |  |  |
|                        | J2   | +133° / -105°   | +135° / -105 °  | +135° / -105 ° |  |  |
|                        | J3   |                 | +60° / -205°    |                |  |  |
|                        | J4   |                 | ±190°           |                |  |  |
|                        | J5   |                 | ±120°           |                |  |  |
|                        | J6   |                 | ±360°           |                |  |  |
| Max. Speed             | J1   | 450°/ sec       | 370°/ sec       | 240°/ sec      |  |  |
|                        | J2   | 340°/ sec       | 260°/ sec       | 220°/ sec      |  |  |
|                        | J3   | 510°/ sec       | 410°/ sec       | 295°/ sec      |  |  |
|                        | J4   | 550°/ sec       |                 | 465°/ sec      |  |  |
|                        | J5   | 550°/ sec       |                 | 480°/ sec      |  |  |
|                        | J6   | 820°/ sec       |                 | 705°/ sec      |  |  |
| Max. Composite Speed   | 11,000 mm / sec  | 10,600 mm / sec | 9,400 mm / sec  | 9,100 mm / sec |  |  |
| Allowable Inertia      |  |                 | 0.47 kg*m2      |                |  |  |
|                        |  |                 | 0.47 kg*m2      |                |  |  |
|                        |  |                 | 0.15 kg*m2      |                |  |  |
| Allowable Moment       |  |                 | 16.6 Nm         |                |  |  |
|                        |  |                 | 16.6 Nm         |                |  |  |
|                        |  |                 | 9.4 Nm          |                |  |  |
| Repeatability          | ±0.02 mm   | ±0.03 mm        | ±0.04 mm        | ±0.05 mm       |  |  |
| Standard Cycle Time*1  | 0.32 sec   | 0.35 sec        | 0.48 sec        | 0.54 sec       |  |  |
| Installations          | Table-top, ceiling-mount, wall-mount <sup>2</sup>  |                 |                 |                |  |  |
| Built-in Design        | With 1 12Pos. circular connector for sensor connections and 2 ø6 pneumatic tubes (one for the embedded 3 sets of solenoid valves, one for extension) |                 |                 |                |  |  |
| IP Rating <sup>3</sup> | IP40 (Standard) / IP65 (Optional) <sup>4</sup>   |                 | IP65 (Standard) |                |  |  |
| Environment            | Ambient Temperature  | 0°C ~ 40°C      |                 |                |  |  |
|                        | Humidity   | 20 ~ 85 %RH     |                 |                |  |  |
|                        | Vibration  | 0.5 G           |                 |                |  |  |
| Weight                 | 37 kg  | 39 kg           | 76 kg           | 82 kg          |  |  |
| Robot Controller       | DCV Series   |                 |                 |                |  |  |

# MODULAR MANUFACTURING SYSTEM WITH IOT & AR-VR

SMPST-101 is a flexible and compact MODULAR system which includes industrial automation technologies. SMPST -101 comprises up to 5 independent stations with integrated control. This modular equipment features a higher number of stations in the same space, which means that more users will be able to work at the same time. Starting with an initial basic configuration station can be easily enhanced by adding workstations at later stages as per the need.

SMPST -101 offers professional skills training to suit the world of industry using Standardized industrial components. The different stations such as Feeder Station, Inspection and Quality station, Buffer Station, Process Station and Sorting Station provide the system with greater flexibility, the stations adapt to a wide variety of assemblies, introducing variations in the materials, colors and part sizes.



Feeder Station



Inspection Station



Buffer Station



Sorting Station



Process Station

## Virtual Reality

### • Augmented Reality



### • AR-VR Devices



# COMPUTER INTEGRATED MANUFACTURING (CIM) SET UP



Industrial



Educational

## Highlights of CadMech CIM Setup

The Integration of the total manufacturing of enterprise through the use of integrated

systems and data communications coupled with new managerial philosophies that improve organizational and manufacturing efficiencies.

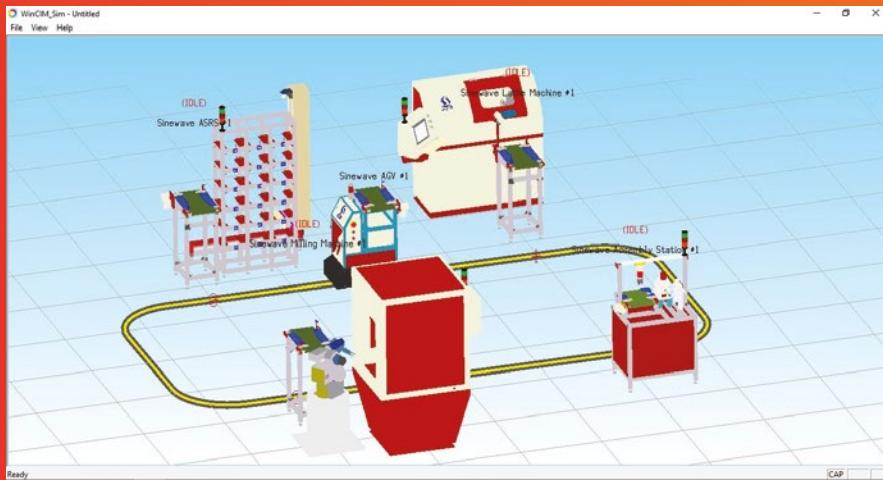
## CadMech CIM Setup Comprises of

- Electronic Height Gauge
- Automated Guided Vehicle
- Coordinate Measurement Machine
- CNC Mill Trainer with Loading Arm
- CNC Lathe Trainer with Loading Arm
- Vision Inspection System (Quality Control Station)
- ASRS
- 6 Axis Robot
- SCARA Robot
- Pallet Conveyor
- Assembly Station

## Integration of Systems and Technologies

- Material storage and feeding (ASRS, feeders, palletizing racks).
- Material handling (robots, conveyors, slidebases, pneumatic transfer units, Positioning tables, vises, end effectors and tool changers).
- CNC machining (turning, milling, engraving, automatic tool changers).

- Pneumatic and hydraulic systems (manipulators, Chucks, feeders, vises)
- Identification, detection and tracking (RFID scanning, pallet tracking sensors, switches).
- Quality control (machine vision, coordinate measuring machine, electronic height Gauge).
- Programmable logic controllers (PLC)



## Real Time Simulation

### Software Architecture

- Interfaces with a variety of machines and robots by means of device drivers (small interface programs that translate and transmit messages between the CIM manager and the machines at CIM stations).
- Stores all data in standard industrial database format, allowing easy access and manipulation on any level. Data files can be read by any Windows application (e.g., Excel, Access, MS-SQL) and exported to any other application. Easily imports and uses data files from external applications.

### Dynamic 3D Graphic Simulation

- Fully functional, dynamic 3D simulation module.
- Accurately simulates operations and movements of machines, robots and peripheral axes, including components such as safety Doors, chucks and spindles.

- Accurately simulates part transportation and manipulation, including movement of pallets on conveyor and supply of parts from storage cells and feeders.
- Accurately simulates manufacturing processing, including milling, turning, engraving.
- View control: zoom in and out, rotate (pan), view from above, below and any angle in between; camera redirect (reset camera's focal point), drag camera.
- Improves comprehension of CIM management and manufacturing processes by viewing 3D graphic dynamic on-screen simulations.
- Allows programming and operation of the CIM system without causing damage to actual equipment or disrupting operation of the actual CIM cell.
- Enables experimentation with CIM cells in which some components actually operate while others are simulated.

# HYDRAULIC TRAINER AND PNEUMATIC TRAINER

## Features

- Mobile and self-contained unit, only electrical connections are required.
- Simplicity of operation and designed for amateur use.
- Built in safety valve is fitted.
- Modern Industrial components from reputed manufacturers are used
- Realistic Industrial circuits are demonstrated.
- Special fixture used for pipe bending and ferrule fitting arrangement.
- System is flushed with very high velocity (4 times the working) by separate oil which maintains class cleanliness of system.
- All valves, cylinder are tested at 150% working pressure.
- Cylinder from precision honed tube, hardened ground, hard chrome plated piston rod and imported quality seals.
- Flow measurement is possible in different lines.
- Training of Trainers offered at regular intervals.
- Potential free contacts for limit switches



Pneumatic Trainer

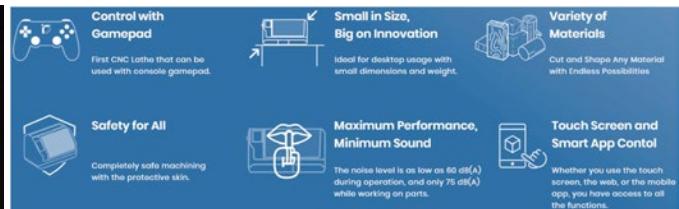
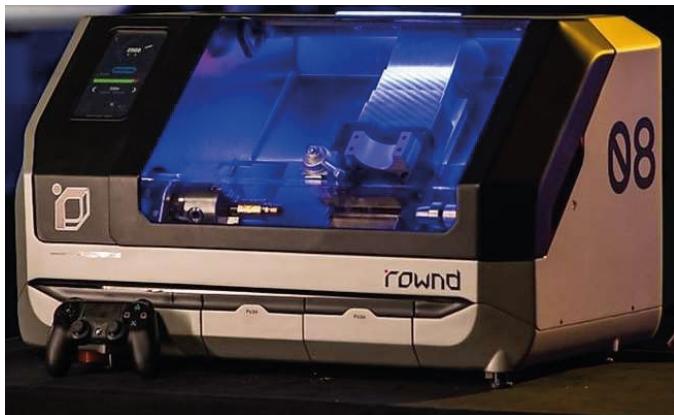


Hydraulic Trainer

## Specifications

| Components   | Basic     | Electro Hydraulic | PLC Based Hydraulic | Components                                   | Basic     | Electro Hydraulic | PLC Based Hydraulic |
|--|-----------|-------------------|---------------------|--|-----------|-------------------|---------------------|
| Trolley with frame & caster wheels                       | 1         | 1                 | 1                   | Trolley with Caster wheels                   | 1         | 1                 | 1                   |
| Hydraulic Tank with Filter & Breather                    | 1         | 1                 | 1                   | Quick Push-Pull connection                   | 12        | 30                | 1 Set               |
| 3 Phase Foot & Flange mounted Electric Motor             | 1         | 1                 | 1                   | High Pressure Tubing (PU6)                   | 5m        | 9m                | 12m                 |
| Bell Housing   | 1         | 1                 | 1                   | 5/2 way lever operated valve                 | 1         | 1                 | 1                   |
| Flexible coupling  | 1         | 1                 | 1                   | 5/3 way Lever operated DC valve              | 1         | 2                 | 2                   |
| Pressure Gauges  | 2         | 3                 | 3                   | Pressure Gauge 4" Dial                       | 1         | 1                 | 1                   |
| Gear Pump  | 1         | 1                 | 1                   | 5/2 way Single Pilot operated                | 1         | 1                 | 1                   |
| Relief Valve   | 1         | 1                 | 1                   | Direction control valve                      |           |                   |                     |
| 4/3 way Direction control valve                          | 1         | 1                 | 1                   | 5/2 way Double pilot operated                | 1         | 1                 | 1                   |
| Valve mounting plate                                     | 1         | 1                 | 1                   | Direction control valve                      |           |                   |                     |
| Throttle valve Pressure compensated Flow control valve   | 1         | 1                 | 1                   | AND Gate valve                               | 1         | 1                 | 1                   |
| Check valve  | 1         | 1                 | 1                   | OR Gate valve                                | 1         | 1                 | 1                   |
| Single Acting cylinder                                   | 1         | 1                 | 1                   | Time delay valve                             | NA        | 1                 | 1                   |
| Double Acting cylinder                                   | 1         | 2                 | 2                   | Quick exhaust valve                          | 1         | 1                 | 1                   |
| 4/2 way Direction control valve                          | 1         | 1                 | 1                   | One way flow control valve                   | 2         | 2                 | 2                   |
| Pilot operated check valve                               | NA        | 1                 | 1                   | Single acting cylinder                       | 1         | 1                 | 1                   |
| Sequence valve   | 1         | 1                 | 1                   | Double acting cylinder                       | 1         | 2                 | 2                   |
| Pressure Reducing valve                                  | 1         | 1                 | 1                   | FRL unit                                     | 1         | 1                 | 1                   |
| Flow meter   | NA        | 1                 | 1                   | Manifold                                     | 1         | 1                 | 1                   |
| Pressure switch  | NA        | 1                 | 1                   | Connecting plates                            | 1 Set     | 1 Set             | 1 Set               |
| 4/3 way Double Solenoid operated Direction control valve | NA        | 1                 | 2                   | Pneumatic motor                              | NA        | 1                 | 1                   |
| 4/2 way Single Solenoid operated Direction control valve | NA        | 1                 | 2                   | Vacuum generator                             | NA        | 1                 | 1                   |
| Limit Switches   | NA        | 2                 | 2                   | Proximity sensor (Inductive)                 | NA        | 1                 | 1                   |
| Proximity sensor   | NA        | 2                 | 2                   | Limit switch (Electrical)                    | NA        | 2                 | 2                   |
| Electro Hydraulic controller                             | NA        | 1                 | 1                   | 5/2 way single solenoid operated             | NA        | 2                 | 2                   |
| Hydraulic High Set Pressure Hoses                        | 6         | 14                | 1                   | direction control valve                      |           |                   |                     |
| <b>PLC (SIEMENS/DELTA)</b>                               | <b>NA</b> | <b>NA</b>         | <b>1</b>            | <b>5/2 way Double solenoid operated</b>      | <b>NA</b> | <b>2</b>          | <b>2</b>            |
|  |           |                   |                     | <b>direction control valve</b>               |           |                   |                     |
|  |           |                   |                     | <b>Electronic panel</b>                      | <b>NA</b> | <b>1</b>          | <b>1</b>            |
|  |           |                   |                     | <b>PLC (ALLEN BRADLEY / SIEMENS / DELTA)</b> |           |                   |                     |

# FAB LAB SETUP



- Rownd is meticulously crafted to ensure an enjoyable and seamless user experience.
- Rownd is user-friendly & it's a learning curve that sparks growth and hones your skills, nurturing your creative spirit along the way.

## Specifications

|                               |  |
|-------------------------------|--|
| • Work piece diameter (max.)  | : 150 mm                                     |
| • Work piece Length           | : 300 mm                                     |
| • Chuck diameter              | : 80 mm                                      |
| • X travel                    | : 125 mm                                     |
| • Z travel                    | : 450 mm                                     |
| • Chassis                     | : Aluminium                                  |
| • Shell                       | : Stainless Steel & Plastic                  |
| • Travel of tailstock         | : 100 mm                                     |
| • Spindle Speed               | : 0 - 3000 RPM                               |
| • The max. moving speed       | : 2000 mm/min                                |
| • The max. feeding speed      | : 1000 mm/min                                |
| • Tool dimension              | : 10x10 mm                                   |
| • Tailstock taper             | : MT1  |
| • Tailstock sleeve diameter   | : 20 mm                                      |
| • Chuck through-hole          | : 11 mm                                      |
| • ATC tool position(Optional) | : 4 position(Optional)                       |
| • 4th axis spindle type       | : e11  |
| • Overall dimension           | : 750x450x450 mm                             |
| • Packing Size                | : 800x500x500 mm                             |
| • Weight(NW/GW)               | : 50/65 kg                                   |
| • Positioning accuracy        | : 0.02 mm                                    |
| • Repeatability accuracy      | : 0.02 mm                                    |
| • Tool touch probe accuracy   | : 0.001 mm                                   |
| • Spindle motor power         | : 800 W                                      |
| • 4th axis spindle power      | : 400 W                                      |
| • Laser engraver              | : 8 W  |
| • Voltage                     | : 100-240 VAC, 50/60 Hz                      |
| • Max Power                   | : 1200W @220 V, 1400W @110 V                 |
| • Display                     | : 7-inch 1280x720 Multi Touch Screen         |
| • Connectivity                | : Wi-Fi, CAN, Bus, Usb Type-C                |
| • Storage                     | : 4 GB EMMC, SD Card Reader                  |
| • Control Interface           | : Gamepad, APP, Touch Screen, PC Application |



CNC Lathe Trainer



CNC Mill Trainer



5 Axis Desktop CNC



Desktop CNC Waterjet Cutting Machine



Desktop CNC Router



Desktop CO2 Engravers

# 6 AXIS INDUSTRIAL ROBOT CELL

## 6-Axis Industrial Robotics Lab with Working Cells



SCARA Robot Lab



AI Robot With Conveyor



3D Printing



# POCKET NC

## MODEL - V2-10\_V2-50



| Axis           | Max Travel  | Speed                   | Machine Control  |   |
|----------------|---|-------------------------|--|---|
| X              | 4.55 in (115.5 mm)  | 60 in/min (1524 mm/min) | Texas Instruments ARM Cortex-A8 running<br>Machinekit/Rockhopper   |   |
| y              | 5.05 in (128.3 mm)  | 60 in/min (1524 mm/min) |  |   |
| z              | 3.55 in (90.1 mm)   | 60 in/min (1524 mm/min) |  |   |
| A              | -25° to 135°  | 40°/second              |  |   |
| b              | Continuous rotation<br>(-9999° to 9999°)  | 40°/second              |  |   |
| Axis           | Backlash  |                         | Accepts Standard Gcode   |   |
| X & y          | 0.0005 in (12.7 µm) at tool base  |                         | Features   | Spindle Override<br>Feed Override<br>Stop, Start, Pause<br>5 axis simultaneous movement |
| z              | Backlash at 18 pound (8.16 kg) load:<br>0.0005 in (12.7 µm)   |                         | Connectivity   | Ethernet, USB, and mini USB   |
| A & B          | 0.01°   |                         | Power Source   | 90-264 VAC, 127-370 VDC, 47-63Hz  |
| Axis           | Resolution & Repeatability  |                         | Components   |   |
| X & z          | Resolution: 0.00024 in (6.10µm)<br>Homing Repeatability: ±0.0005 in (12.7µm)<br>Repeatability: ±0.002 in (50.8µm) at 0% |                         | 6061 Aluminum Frame, ±0.001 in (+/-25.4 µm)<br>squareness in all axes  |   |
| A & B          | Resolution: 0.00024 in (6.10µm)<br>Homing Repeatability: ±0.0005 in (12.7µm)<br>Repeatability: ±0.002 in (50.8µm) at 0% |                         | Machine Footprint: 17.5 in (444.5 mm) x 12.5 in (279.3 mm)   |   |
|                | Recommended part tolerance ±0.005in (.127mm)  |                         | 5 NEMA 17<br>Motors  | 3 linear lead screws with preloaded nuts<br>2 Rotary Worm Drives                        |
| <b>Spindle</b> |   |                         | Linear Bearings  | 9 and 42mm, 10% preload   |
|                |   |                         | Integrated angular contact rotary bearings   |   |
|                |   |                         | Purchase Includes:   |   |
|                |   |                         | <ul style="list-style-type: none"> <li>One extended reach tool holder</li> <li>1/8 inch ER11 collet and nut</li> <li>1/8 inch square end mill, single flute</li> <li>Pocket NC vise and hardware</li> <li>Pocket NC limited 1-year warranty</li> </ul> |   |
| Spindle Speed  | 2,000-10,000 RPM  |                         | <b>Max Travel</b>  |   |
| Power          | 200 W (Max Power)   |                         | <ul style="list-style-type: none"> <li>X: 4.55 in (115.5mm)</li> <li>Y: 5.05 in (128.3 mm)</li> <li>Z: 3.55 in (90.1mm)</li> <li>A: -25° to 135°</li> <li>B: Continuous Rotation (-9999° to 9999°)</li> </ul>  |   |
| Spindle Motor  | BLDC 3 Phase with Hall Feedback   |                         | <ul style="list-style-type: none"> <li>Tested on G5 titanium, 6061 aluminum, 303 stainless, machinable wax, acetal.</li> <li>Accepts standard G Code. Test G Code at <a href="http://sim.pocketnc.com">sim.pocketnc.com</a></li> </ul>                 |   |
| Spindle Runout | ~0.0005 in (12.7 µm)  |                         |  |   |
| Tool Change    | 3mm Hex Key ER11 Collet   |                         |  |   |

# WAZER WATER CUTTER



Standup Model



Desktop Model

## Specifications

|                           |  |
|---------------------------|--|
| • Cut bed size (D X W)    | : 13 X 19 in (330 X 485 mm)                                      |
| • Cutting area            | : 12 X 18 in (305 X 460 mm)                                      |
| • Width of cut            | : 0.044" (1.2mm)   |
| • Abrasive usage          | : 0.33 lb/min (140g-150g/min)                                    |
| • Power                   | : 220 V / 50 Hz  |
| • Software                | : Free, web-based (WAM)  |
| • File Types              | : .dxf, .svg   |
| • Warranty                | : 1 year   |
| • Cutting Materials       | : Cuts Any metal, glass, plastic, composites, tile, rubber, foam |
| • Cutting Speed           | : Depends on Material and Thickness                              |
| • Max. Cutting Thickness  | : Varies by Material   |
| • Continuous Cutting Time | : 60 min (prior to refilling the abrasive hopper)                |
| • Working pressure        | : 4,600 psi / 317 bar  |
| • Working flow rate       | : 0.5 GPM / 1.9 L / min  |
| • Water source            | : Filtered Tap Water   |
| • Input water filter      | : 300 mesh   |
| • Input water pressure    | : (Minimum) 35 psi / 2.4 bar                                     |
| • Input water flow rate   | : (Minimum) 1 GPM / 3.8 L/min                                    |

## Abrasive Specifications

|                     |                           |
|---------------------|---------------------------|
| • Material          | : 80 Mesh Alluvial Garnet |
| • Abrasive capacity | : 30 lb / 13.5 kg         |



1. Upload Your Design  
Prepare your design for waterjet cutting with our free, web-based software.



2. Load Your Material  
Load any material that fits inside the waterjet machine and fasten it in place.



3. Cut Your Part  
Transfer your cut file to WAZER with an SD card, and let the waterjet take it from there to create your cut pieces.

# RESELLERS' AUTHORIZATION & CERTIFICATIONS



## ISO CERTIFICATE



## TRADEMARKS CERTIFICATE



## NSIC CERTIFICATE



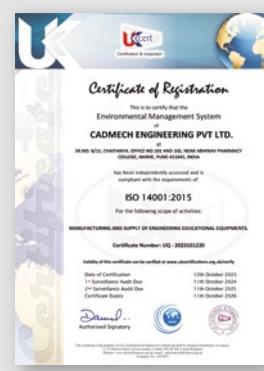
## IMPORT-EXPORT CERTIFICATE



## MSME CERTIFICATE



## GST CERTIFICATE



## OUR BRANDS





# SHAPE THE FUTURE WITH CADMECH

For over 25 years, CadMech Engineering has been more than a provider of lab equipment - we've been a catalyst for progress. Our cutting-edge CNC trainers, smart labs powered by IoT, AR/VR integration, and unmatched service support have empowered institutions to bridge the gap between today's learning and tomorrow's innovation.

In a world driven by rapid technological advancements, CadMech stands as a trusted partner, offering reliable, affordable, and future-ready solutions. We don't just build machines; we build confidence, creativity, and curiosity - fueling the next generation of engineers, innovators, and leaders.

---

***Join us in advancing education, enabling progress, and empowering futures.***

---



CADMECH

---

Ready to Transform Your Learning Spaces?  
Let's innovate together.

Call us: +91 7276032488  
Email: [mktg@cadmech.co.in](mailto:mktg@cadmech.co.in)  
Visit: [www.cadmech.co.in](http://www.cadmech.co.in)

---

**CadMech Engineering Pvt. Ltd.**  
*Advancing Education. Empowering Futures.*