

UMK Link Pvt. Ltd.

UMK

— UV KNOWLEDGE LINK PVT LTD. —

ABOUT COMPANY

UV Knowledge Link Pvt. Ltd.

UVK Link Pvt. Ltd. is an engineering-driven organization that combines design expertise, manufacturing capabilities, and modern technology solutions to help industries innovate and grow. With experience across automotive, aerospace, defence, and industrial sectors.

UVK delivers end-to-end engineering solutions tailored to customer requirements.

UVK Link Pvt. Ltd. is a forward-thinking engineering and technology company based in Nashik, India. Founded with a vision to deliver innovative, reliable, and industry-focused solutions, UVK serves clients across Automotive, Aerospace, Defence, Manufacturing, and Industrial sectors.

- ✓ 25+ Years of Combined Industry Expertise
- ✓ Global Engineering Experience
- ✓ Product Design & Development
- ✓ Manufacturing & Tooling Solutions
- ✓ Industry 4.0 & Digital Transformation
- ✓ Automotive, Aerospace & Defence Projects



VISION & MISSION

Vision

To become a leading global innovator in engineering solutions by leveraging world-class technology, industry expertise, and a passionate team to deliver reliable and trusted solutions across the product development lifecycle.

Mission

- Deliver trustworthy and reliable engineering solutions.
- Support clients from concept to manufacturing.
- Continuously innovate through technology and expertise.
- Empower industries with high-quality engineering services.

Core Values

★ Quality ★ Integrity ★ Teamwork ★ Accountability



LEADERSHIP & FOUNDER

Mr. Yuvraj Vadaje CEO & Founder

BE (Mechanical), ME (Design), PHD (pursuing)

With over 25 years of industry experience, Yuvraj Vadaje brings extensive expertise in Product Design, Engineering Development, Project Management, Electric Vehicles (EV), Industry 4.0, AI, and Industrial Automation. His professional journey includes working with globally recognized organizations across India, Germany, China, and Korea.



Achievements

- 🏆 25+ Years of Industry Experience
- 🌐 International Experience (Germany, China, Korea & India)
- 🚗 Automotive & EV Development Expert
- ✈️ Aerospace & Defence Engineering Experience
- 💡 Multiple Patents Filed in India & Europe
- 🤖 Industry 4.0, IIoT, AI & ML Specialist

Companies Worked With

- Mercedes-Benz Research & Development
- Tata Technologies
- BYD Daimler New Technology (China)
- Mahindra & Mahindra



OUR SERVICES

At UVK, we provide end-to-end engineering and manufacturing solutions that help businesses transform ideas into reality. From product design and tooling to manufacturing, quality inspection, and advanced engineering solutions for Automotive, EV, Aerospace, and Defence industries, our expertise ensures innovation, precision, reliability, and excellence at every stage of the product development lifecycle. We are committed to delivering high-quality, cost-effective, and technology-driven solutions that empower our clients to achieve sustainable growth and operational success.



 **Product Design & Development**



 **Jigs, Fixtures & Tool Design**



 **SPMs & Industrial Automation**



 **Manufacturing**

 **IT / AI / ML / Industry 4.0**



 **Staffing Services**



 **Aviation & Defence**



 **Electric Vehicle (EV)**



ENGINEERING & DESIGN EXPERTISE

Content

Product Design & Development

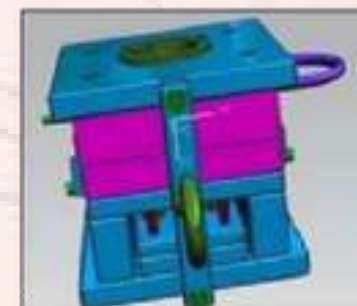
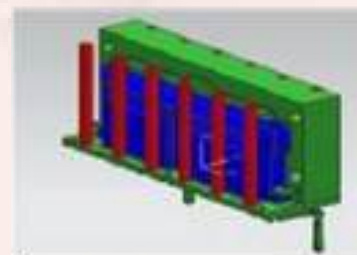
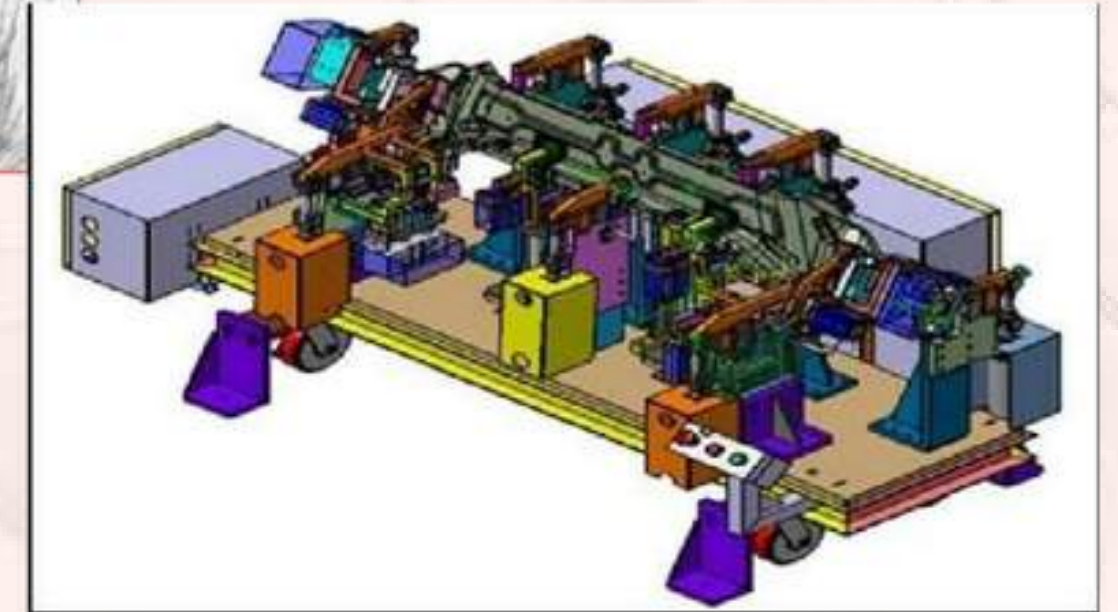
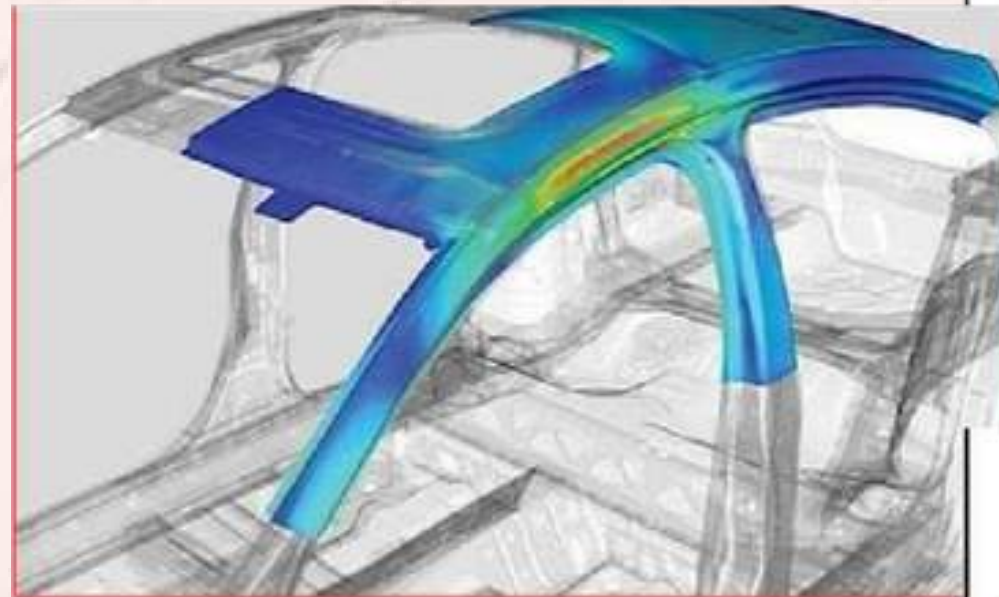
- Interior & Exterior Components Seating Systems
- Concept to Production Support

GD&T & CAE Analysis

- Tolerance Stack-up Analysis
- Gap & Flush Validation Structural Simulation
- Virtual Verification

Tool & Die

- Tool Design Die Design
- Panel Checker Development



MANUFACTURING & INDUSTRIAL SOLUTIONS

Content

⚙️ Jigs & Fixtures

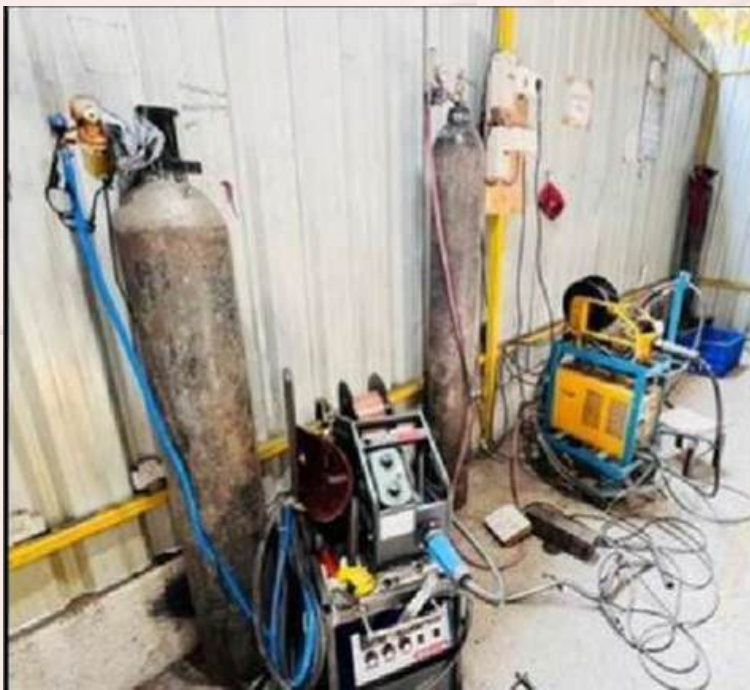
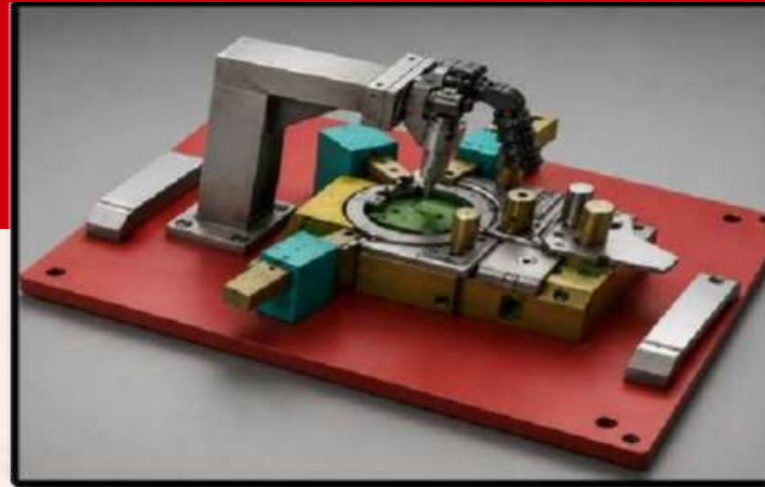
- Drilling Jigs
- Manual Fixture
- Electro-Pneumatic Fixture
- Hydraulic Fixture
- Checking Gauges

🏭 Manufacturing Capabilities

- VMC Machining
- Press Operations
- Milling & Grinding
- Welding Solutions

🤖 Automation & Industry 4.0

- SPM
- Development Industrial Automation
- Smart Manufacturing AI & Digital Engineering



PRODUCT DESIGN & DEVELOPMENT

UVK delivers complete product design solutions from concept creation to manufacturing ready designs.

Capabilities

- BIW (Body in White)
- Design Interior & Exterior Components
- Seating System Development
- Reverse Engineering & Surfacing
- 3D Modelling & CAD Design
- Engineering Validation & Optimization

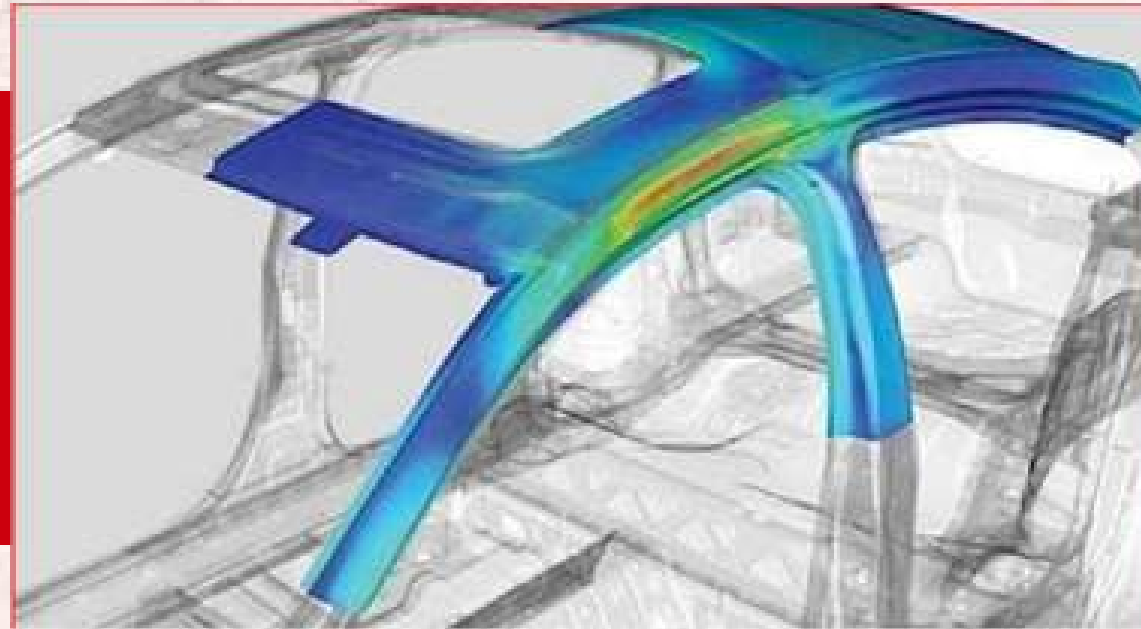
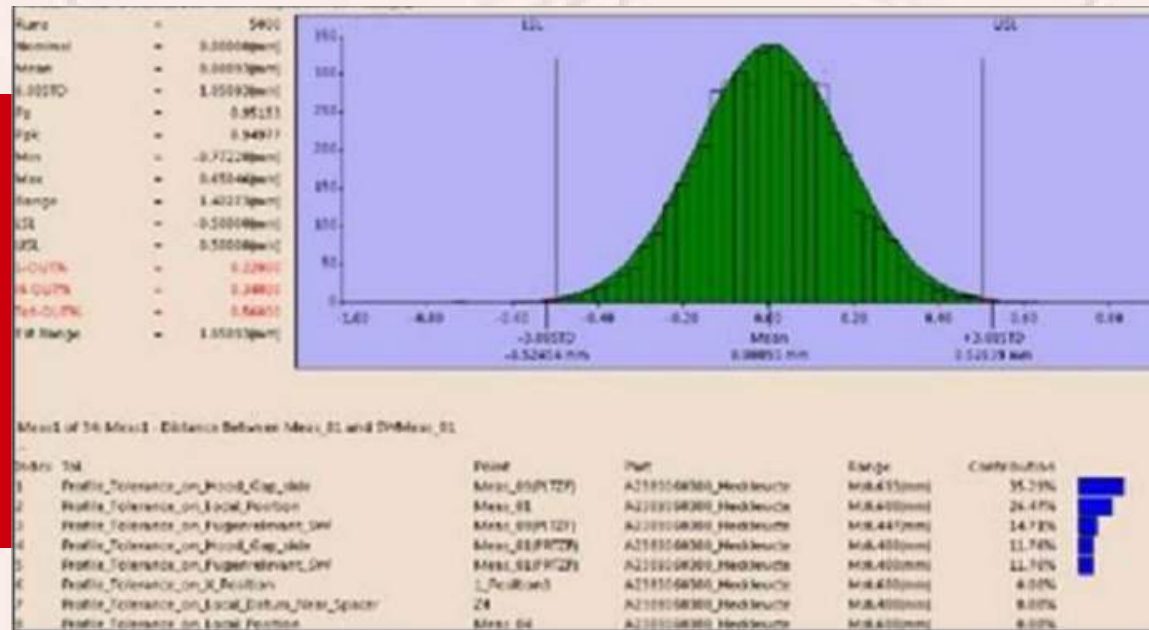
From Concept

Design

Validation

Manufacturing

ADVANCED ENGINEERING & SIMULATION



GD&T Expertise

- Tolerance analysis for accurate assembly
- Gap & Flush validation
- Assembly sequence planning
- Improved product quality

CAE & Virtual Verification

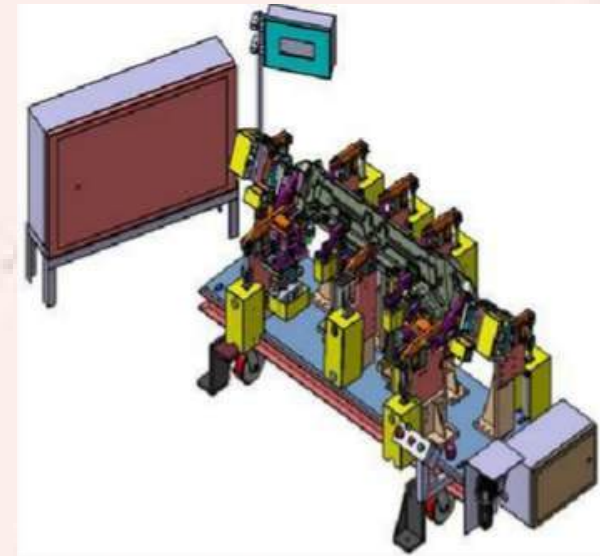
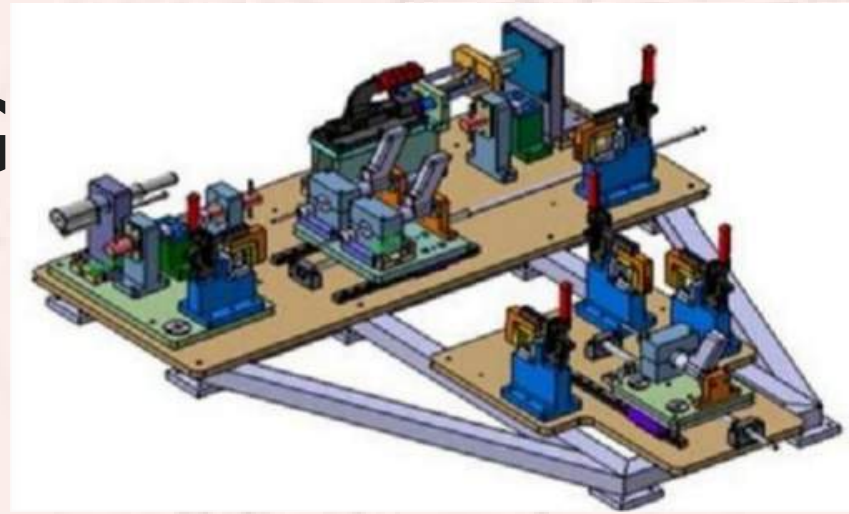
- Structural strength analysis
- Durability & fatigue testing
- Thermal performance analysis
- Vehicle dynamics simulation
- Design optimization

Key Benefits

- ✓ Faster product development
- ✓ Reduced prototype cost
- ✓ Improved product performance
- ✓ Better manufacturing quality
- ✓ Faster time-to-market

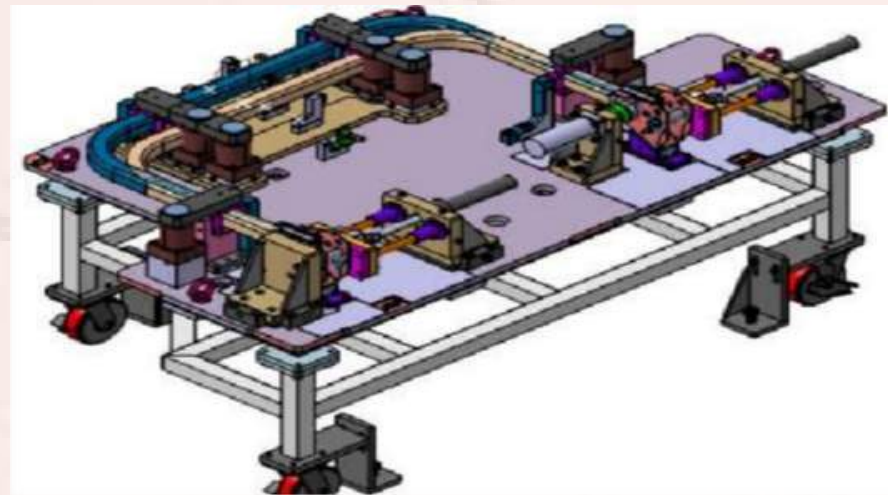
JIGS & FIXTURES DESIGN & MANUFACTURING

UVK specializes in designing and manufacturing high-precision jigs and fixtures for automotive and industrial applications.



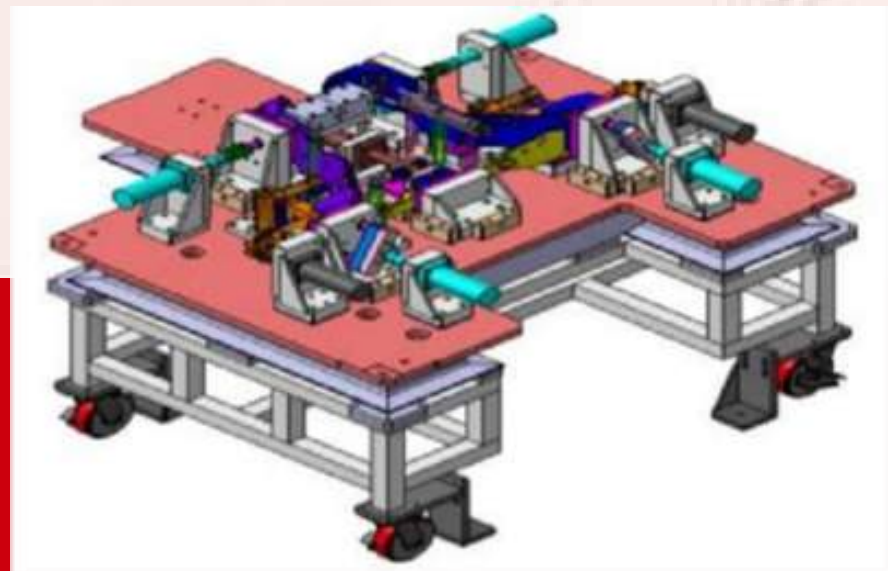
Key Capabilities

- Welding Fixtures
- Checking Fixtures
- Robotic Fixtures
- Electro-Pneumatic Fixtures
- Assembly Fixtures
- Fixture Validation & Testing



Benefits

- ✓ Improved Production Accuracy
- ✓ Reduced Manufacturing Time
- ✓ Consistent Product Quality
- ✓ Increased Productivity



TOOL & DIE MANUFACTURING

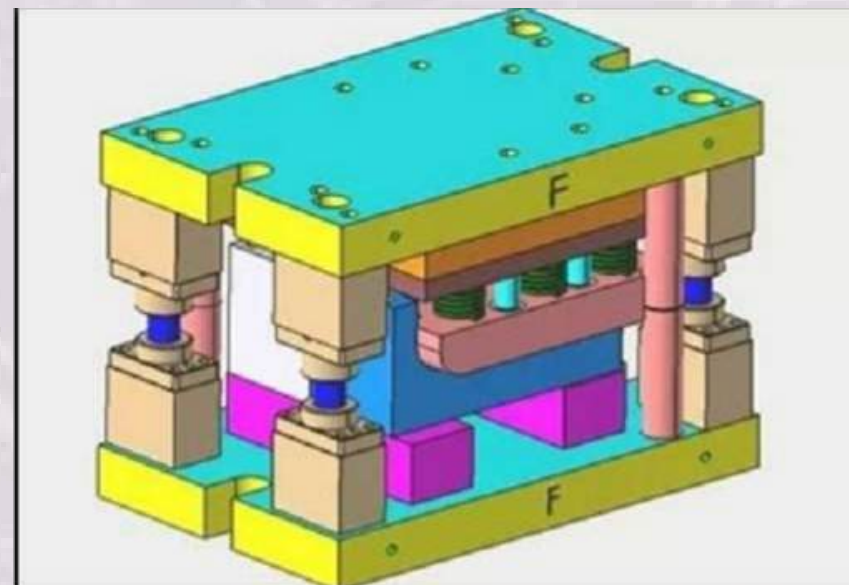
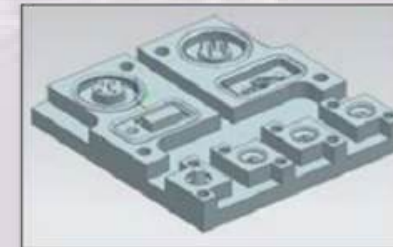
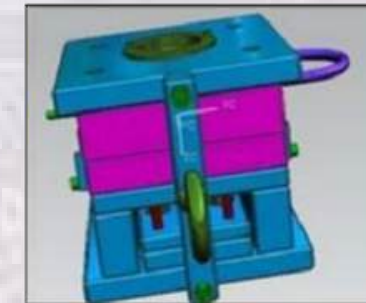
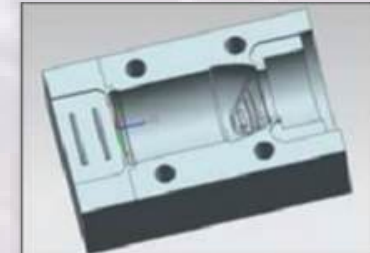
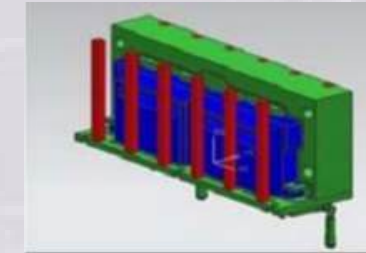
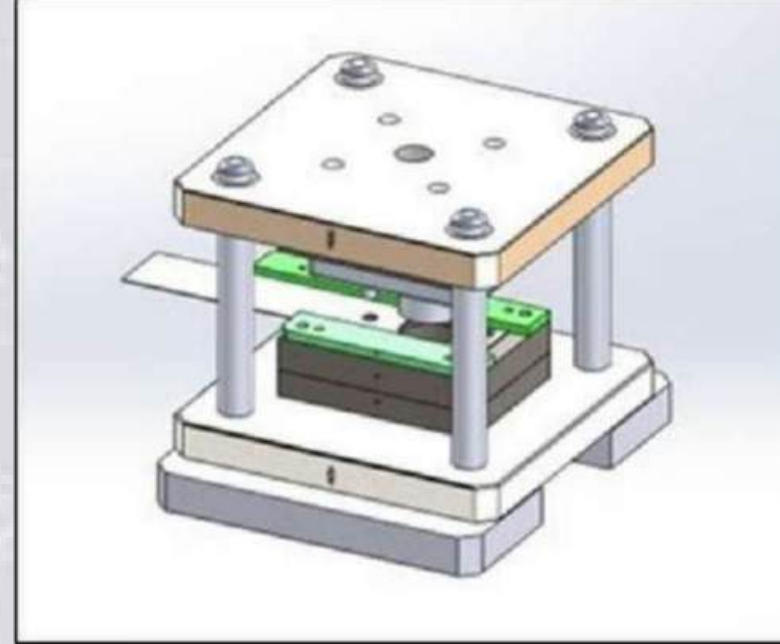
UVK provides end-to-end solutions for tool and die, ensuring precision, durability, and manufacturing efficiency

Key Services

- Tool & Die Design
- Die Optimization
- Panel Checker Design
- Manufacturing & Maintenance Support

Key Advantages

- ✓ High Precision Engineering
- ✓ Improved Tool Life
- ✓ Cost-Effective Manufacturing
- ✓ Faster Production Setup

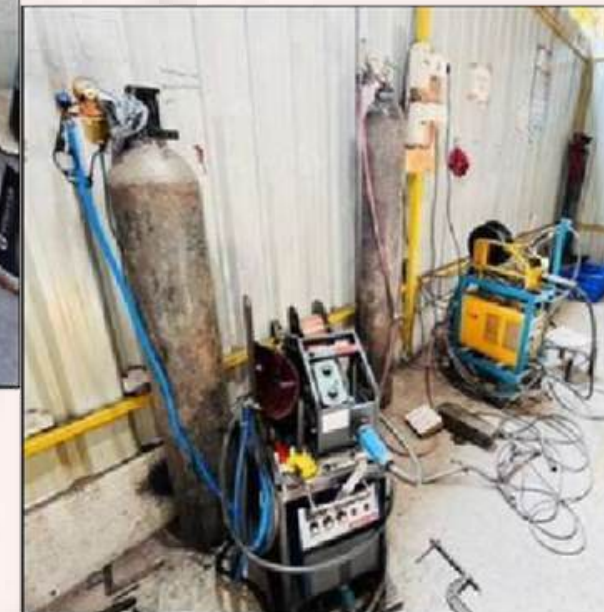


MANUFACTURING CAPABILITIES

UVK is equipped with modern machining and fabrication facilities to deliver high-quality manufacturing solutions.

Infrastructure

- ⚙️ VMC Machine (Vertical Machining Center)
- 🏗️ 150 Ton Mechanical Press Machine
- 🔧 Milling Machine
- 🔧 Lathe Machine
- 🔥 CO₂ Welding Machine
- ⚡ Spot Welding Machine
- 🔧 Surface Grinding Machine



Key Benefits

- ✓ Precision Manufacturing
 - ✓ Quality Assurance
 - ✓ High Production Efficiency
 - ✓ On-Time Delivery
- PrecisionManufacturing

All types of conventional machines and tools

PRODUCT DESIGN & DEVELOPMENT

UVK ensures product quality through advanced inspection and measurement systems.

Inspection Facilities

-  FARO Portable CMM Arm
-  Laser Tracker Machine
-  Q ZEISS Contura
- CMM Precision Dimensional Inspection

Why It Matters

- ✓ High Measurement Accuracy
- ✓ Improved Product Quality
- ✓ Reduced Manufacturing Errors
- ✓ Compliance with Industry Standards



FARO PORTABLE CMM
ARM, FARO QUANTUM



ZEISS CONTURA FIX BED
CMM MACHINE



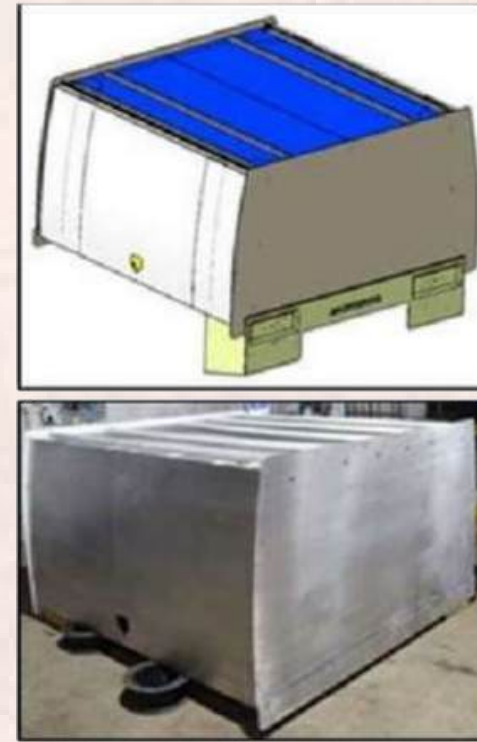
LASER TRACKER MACHINE
VANTAGE E

PROTOTYPE DEVELOPMENT

UVK supports rapid prototype development to validate designs before mass production.

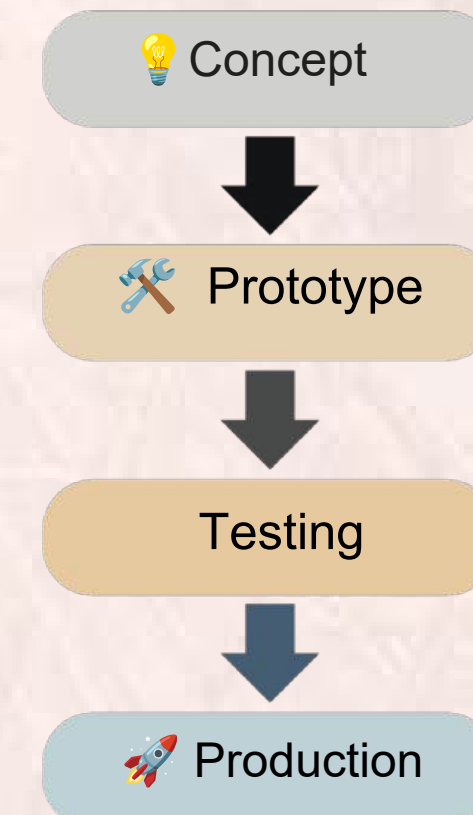
Key Capabilities

- Prototype Tool Design
- Prototype Manufacturing
- Product Testing & Validation
- Design Improvements
- Functional Verification



Key Benefits

- ✓ Faster Product Development
- ✓ Early Issue Identification
- ✓ Reduced Design Risks
- ✓ Improved Product



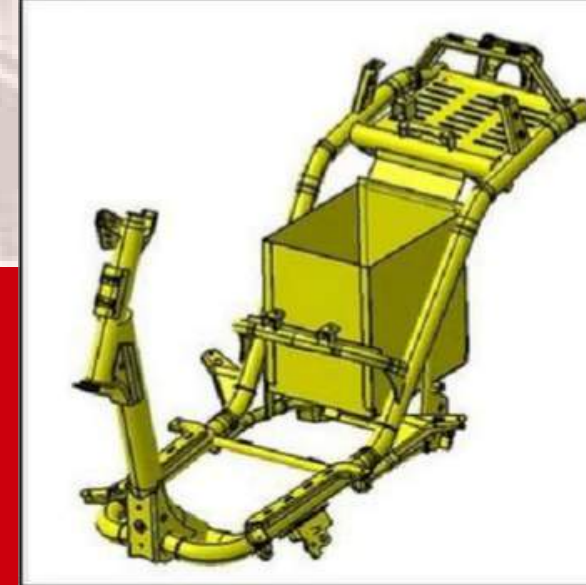
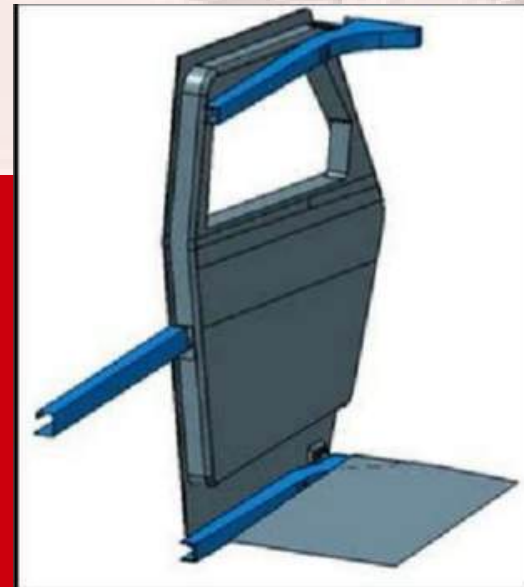
AUTOMOTIVE ENGINEERING EXCELLENCE

Key Project Areas

-  BIW(BodyinWhite) Design
-  Fixture & Tool Development
-  UnderbodyComponent
-  Chassis Design & Development
-  Electric Vehicle Development
-  GD&T & Tolerance Analysis

Major Projects

- ✓ Firewall Assembly Design
- ✓ EV Chassis Design
- ✓ Underbody Parts Design
- ✓ Tata Motors GD&T Analysis
- ✓ Yamaha Sliding Door Design
- ✓ Cargo Design, Development and Manufacturing
- ✓ Electric Scooter Development



AEROSPACE & DEFENCE ENGINEERING

UVK delivers precision engineering solutions for aerospace and defence applications, ensuring high accuracy, reliability, and compliance with industry standards.

Key Expertise

- ✈ Aerospace Fixture Design
- 📐 Q Laser Tracker Inspection
Precision Measurement & Validation
- 🔧 Assembly & Checking Fixtures
- 🎯 High-Accuracy Manufacturing

Key Benefits

- ✓ Precision Engineering
- ✓ Advanced Inspection Systems
- ✓ Aerospace Quality Standards
- ✓ Reliable Project Execution

✈🛡 Engineering Precision for Mission-Critical Applications

Featured Project

- Design, Manufacturing, Installation, Commissioning & Laser Tracker Inspection of Checking Fixtures for LCA Tejas Aircraft Project (HAL, Nashik)
- Trimming, Drilling, and Assembly Fixture for Aircraft (Godrej Aerospace)



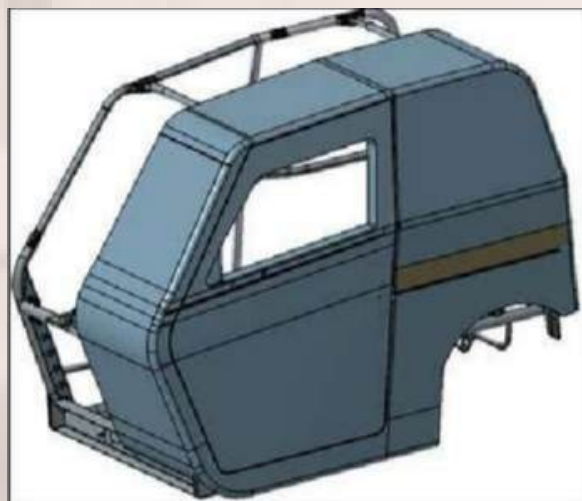
KEYPROJECTS & SUCCESS STORIES

Overview

Over the years, UVK has successfully delivered projects across Automotive, EV, Aerospace, Manufacturing and Industrial Engineering sectors.

Featured Projects

- 🚗 Yamaha Sliding Door Design (Japan)
- ⚡ Electric Scooter Development
- 🔧 EV Chassis Design (M7 & J8)
- 🚜 Mahindra Fixture Development Projects
- 📐 Tata Motors GD&T Analysis
- ✈️ HAL – LCA Tejas Aerospace Project



Achievement Highlights

✓ Automotive Projects

✓ Aerospace Engineering

✓ International Project Experience

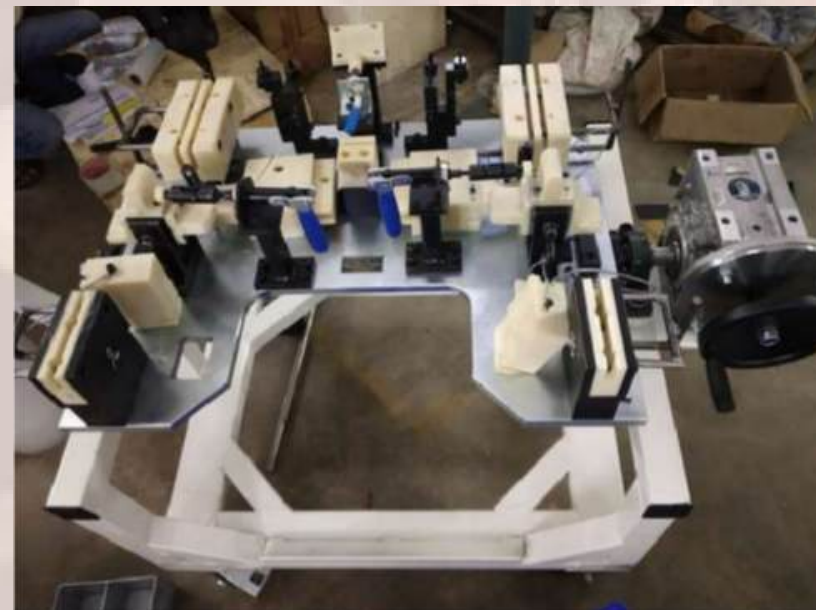
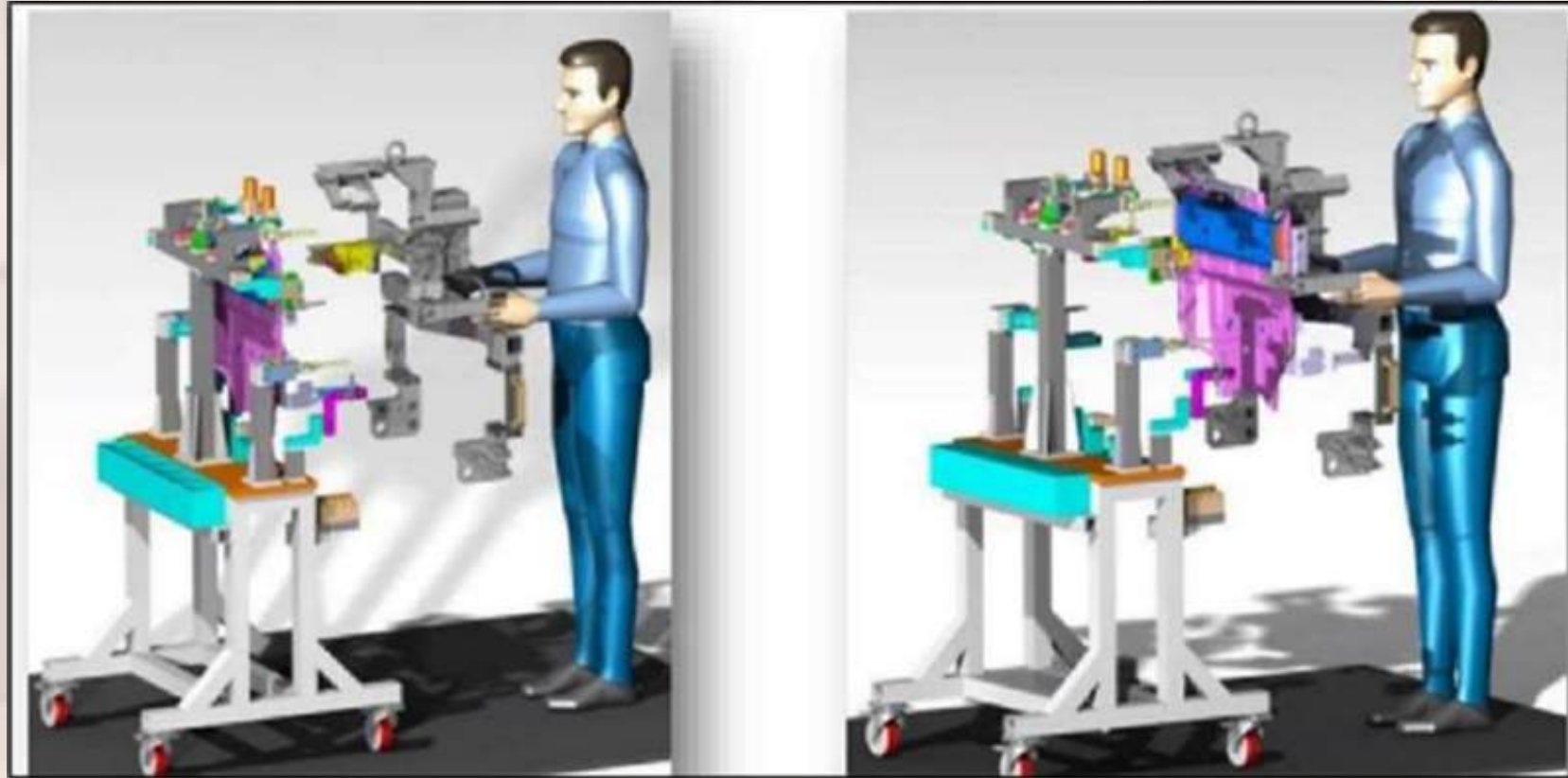
✓ Electric Vehicle Development

✓ Precision Manufacturing

TURNKEY PRODUCTION LINESOLUTIONS

Overview

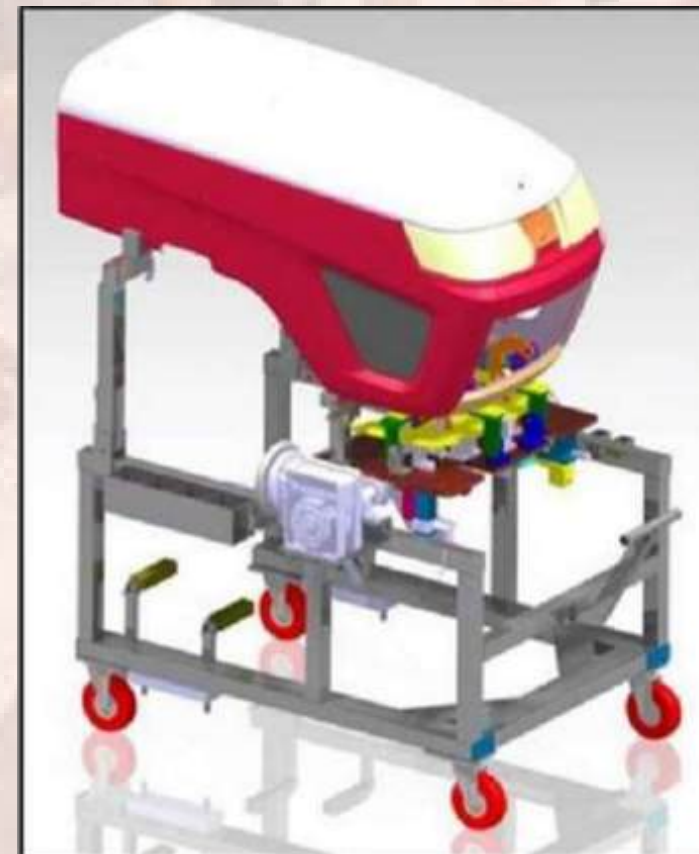
From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support



Featured Projects

TMTL (Eicher Tractors), Bhopal – Production Line Tooling & Assembly Solutions

- Design, Development & Manufacturing of Assembly Line for Scuttle (Tractor) with 12 Variants.
- Design, Development & Manufacturing of Assembly Line for Bonnet (Tractor) with 12 Variants..
- Design, Development & Manufacturing of Assembly Gauges for Production Line Quality & Assembly



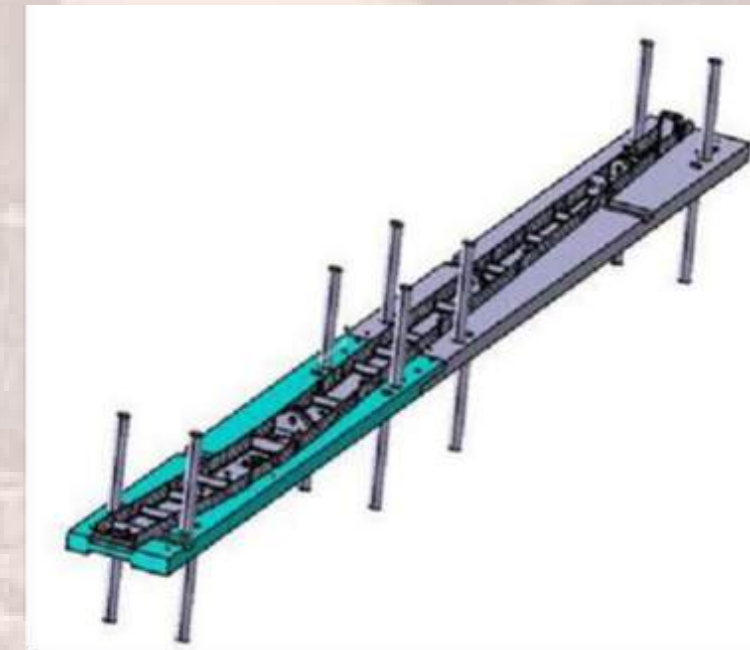
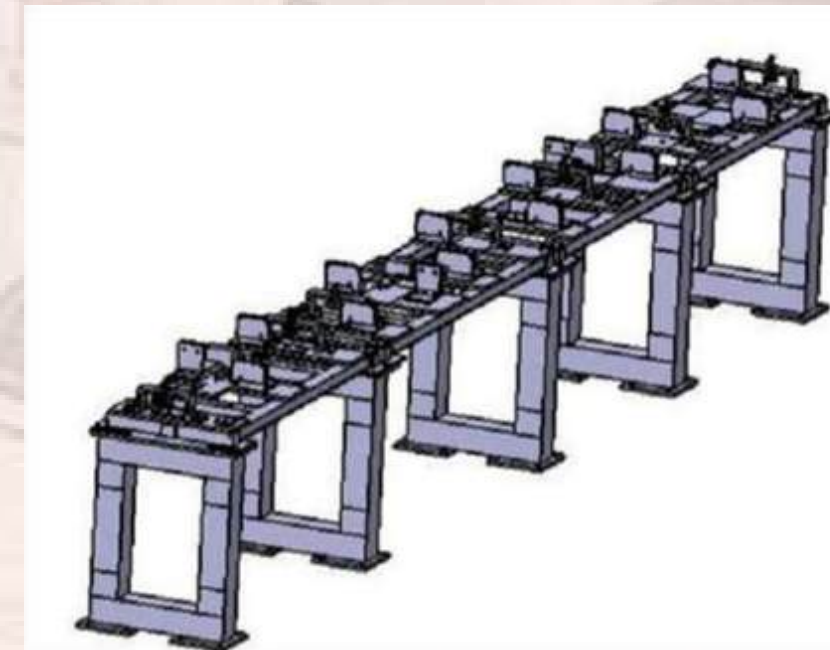
TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support

Featured Projects

- Design, Manufacturing, Installation, Commissioning & Laser Tracker Inspection of Checking Fixtures for Front Spar General Assembly (LH/RH) and Front Spar – LCA TEJAS for Hindustan Aeronautics Limited (HAL), Nashik.



TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support

Featured Projects

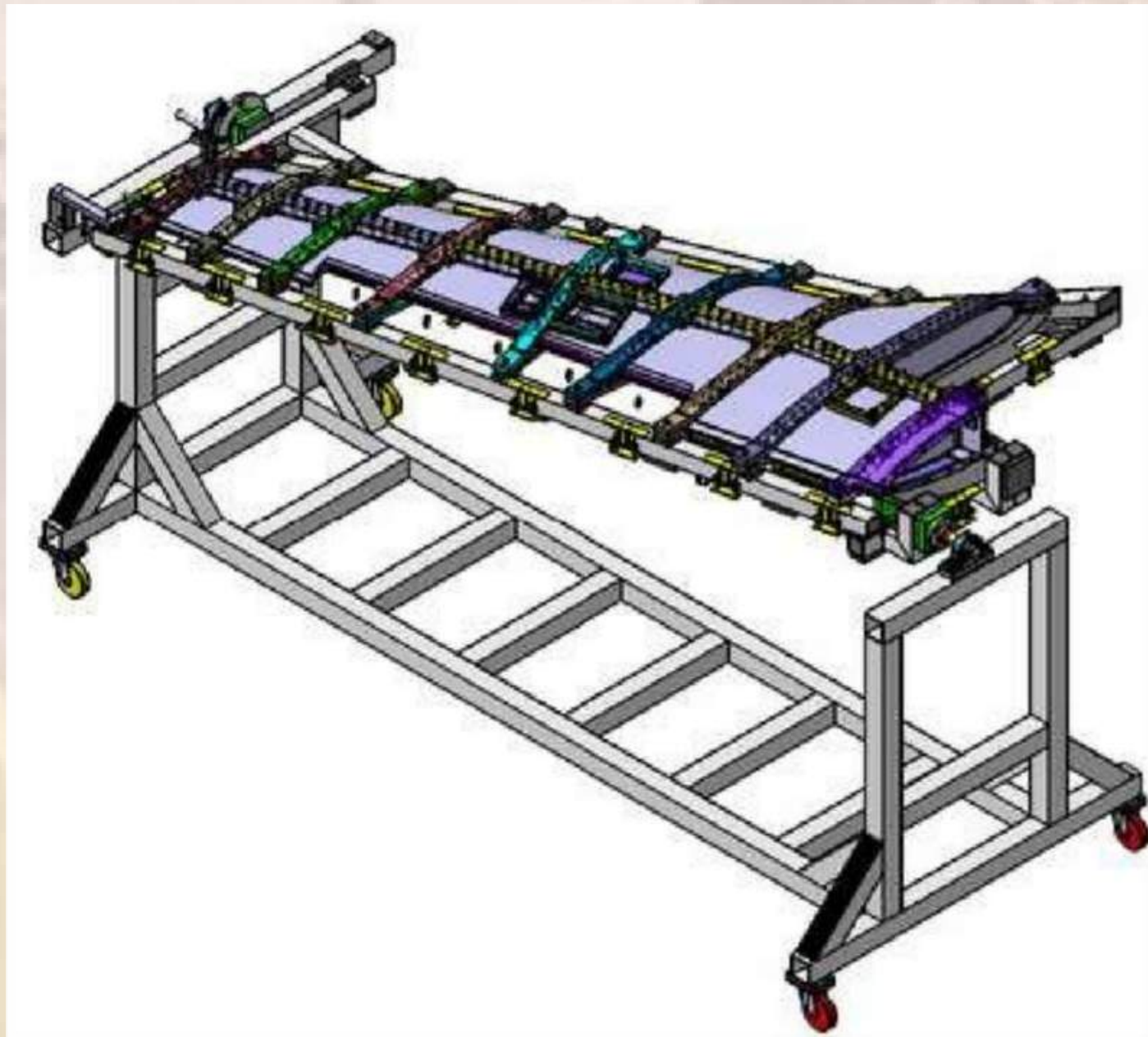
- Complete Design, Development & Manufacturing of Electric Scooter Chassis Line for JNEVT, Nashik



TURNKEY PRODUCTION LINESOLUTIONS

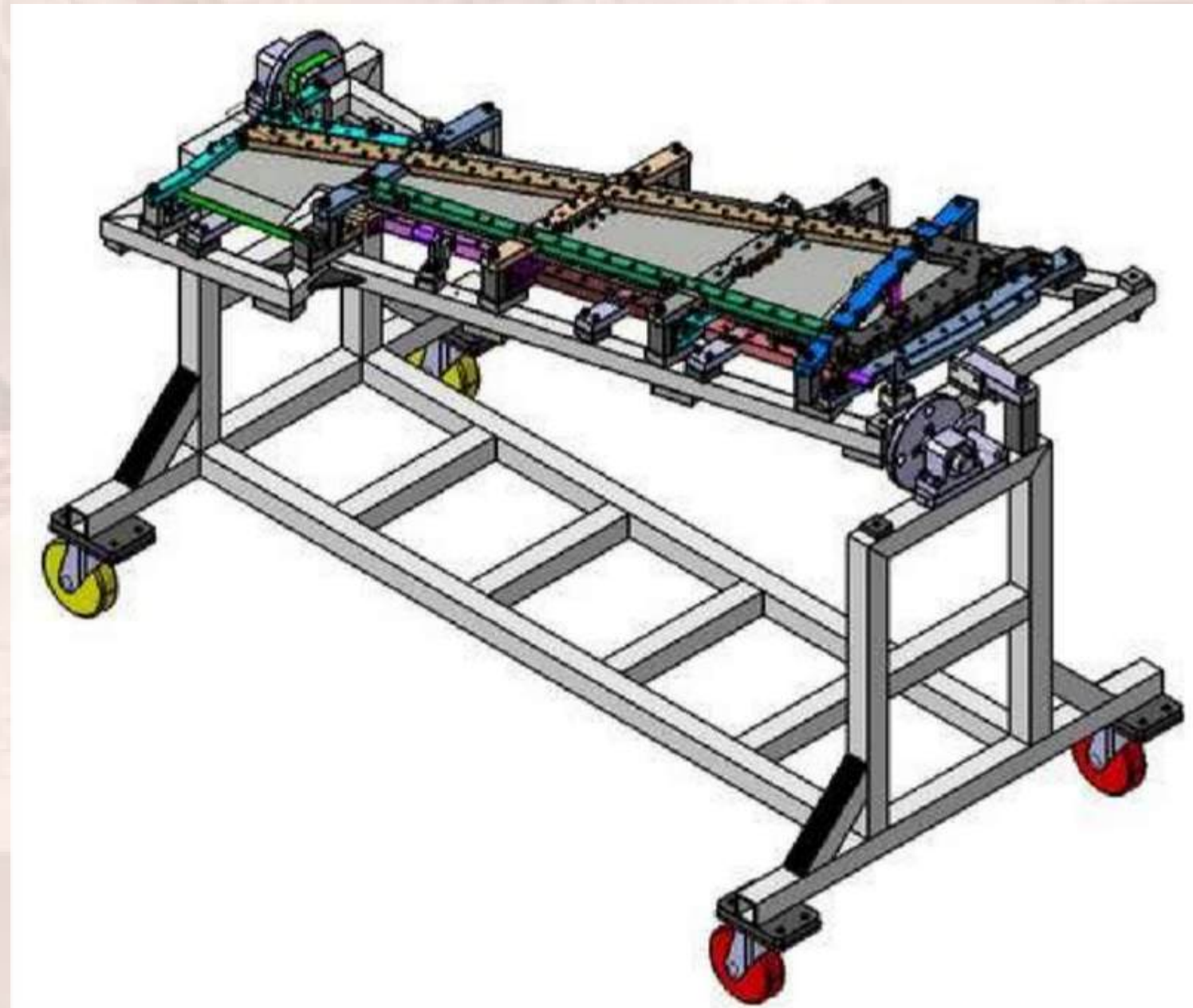
Overview

From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support



Featured Projects

Design, Manufacturing & Supply of Trimming, Drilling & Assembly Fixtures for Horizontal Wing – ADE (Aeronautical Development Establishment), Bengaluru, through Godrej Aviation, Mumbai.



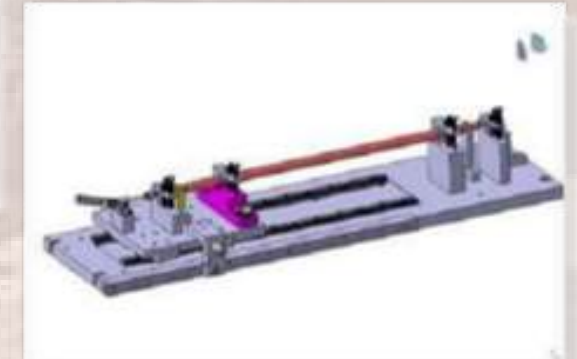
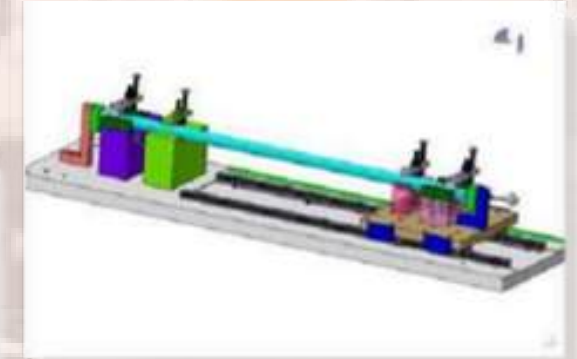
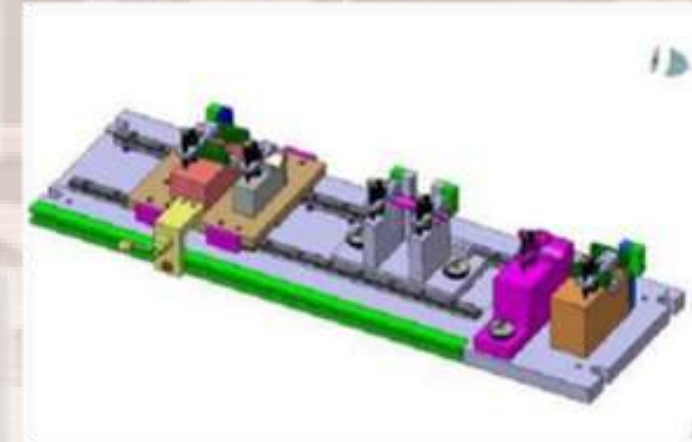
TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support

Featured Projects

- Design & Manufacturing of Precision Drilling and Milling Jigs for the Boeing Torque Tube Production Line – Tata Advanced Systems Limited (TASL), Nagpur.



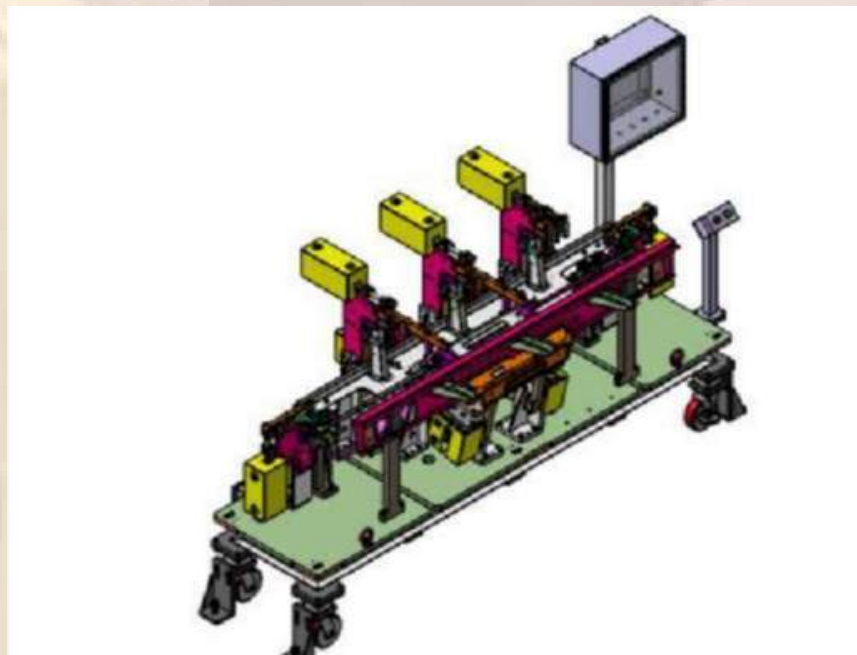
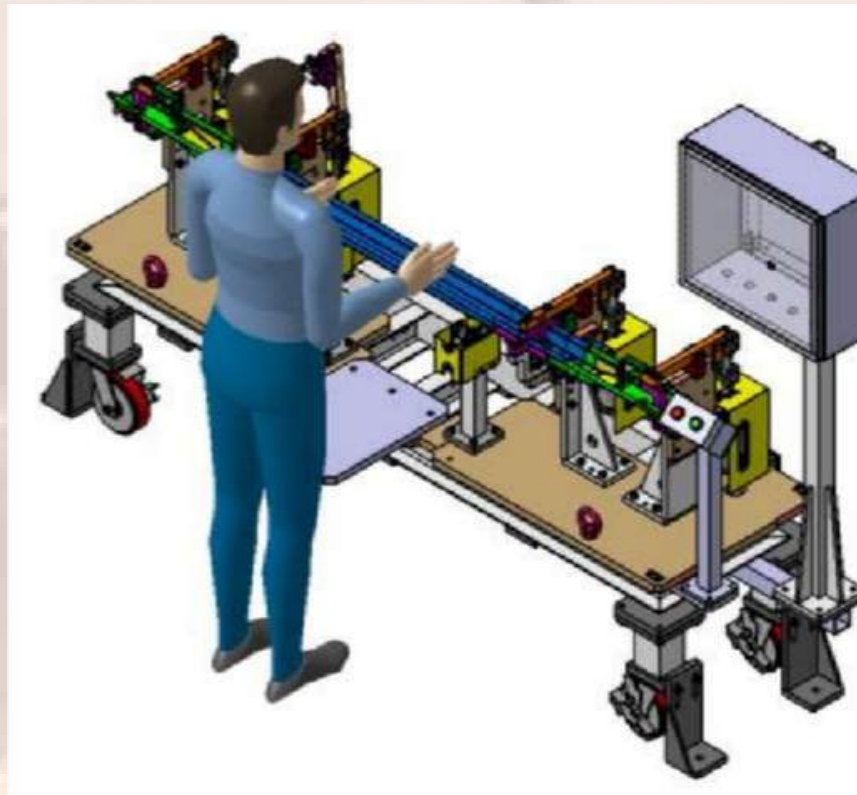
TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing |
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Featured Projects

- HARIDWAR PROJECT- BOLERO CARGO Line
fixtures for Mungi Engineers Pvt. Ltd., Nashik:
CROSS MEMBER ASSY, P148 & P118



TURNKEY PRODUCTION LINESOLUTIONS

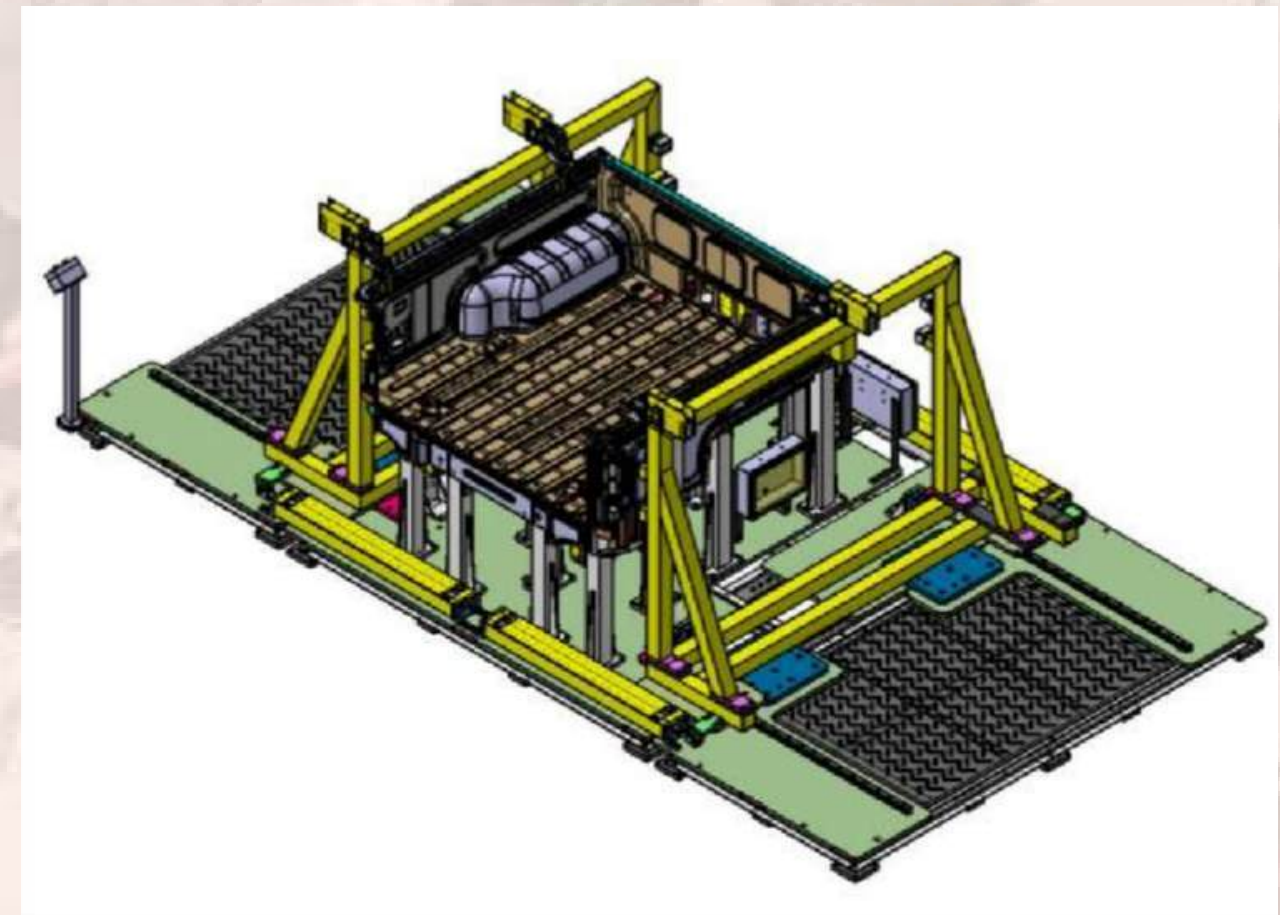
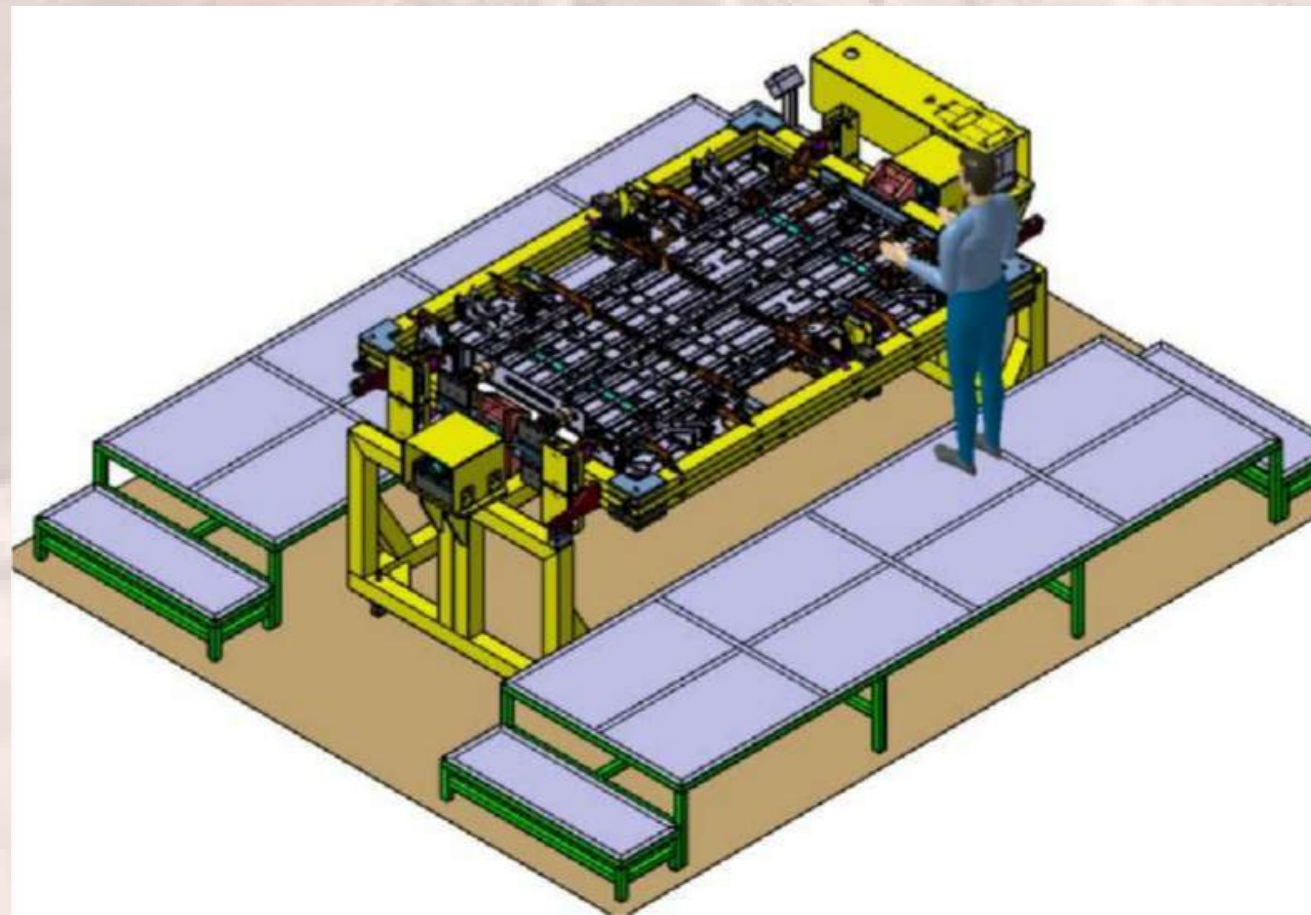
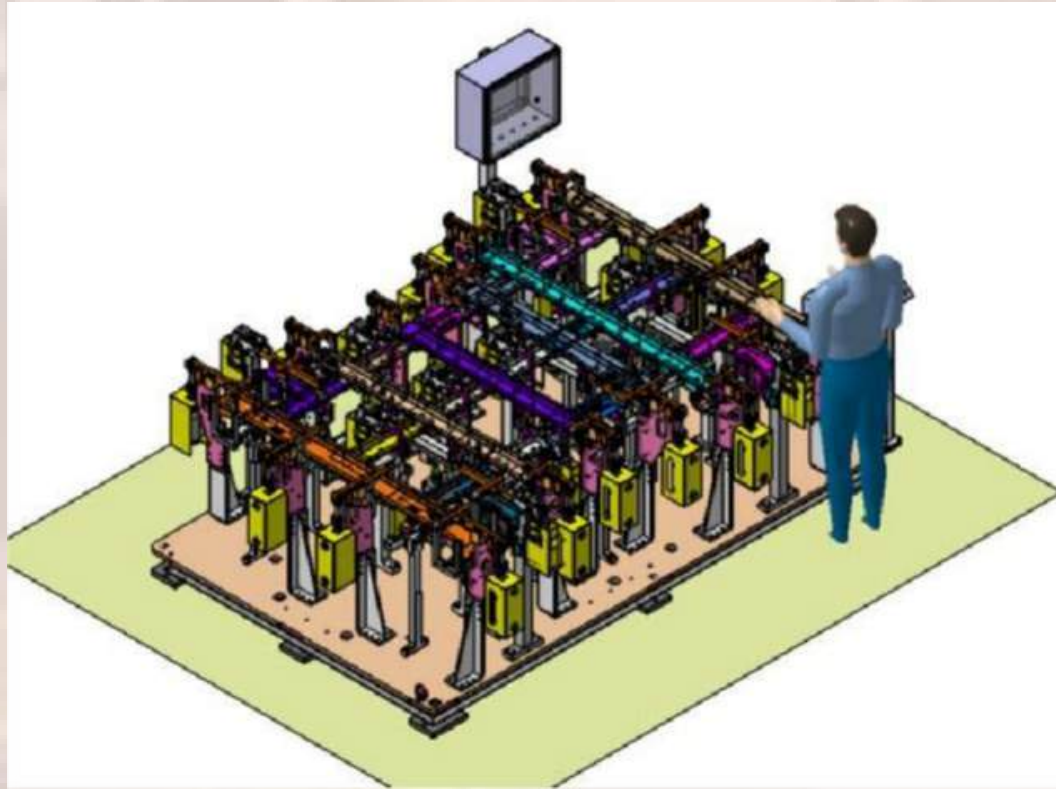
Overview

From Concept to Commissioning Engineering | Design | Manufacturing |
Assembly | Installation | Commissioning | Support

Featured Projects

SC DC PROJECT – SCORPIO CARGO Line for Mungi Engineers, Nashik

- FLOOR LADDER FIXTURE FLOOR
- INVERSION FIXTURE
- INNER MARRIAGE STAGE 01 REPOSTING FIXTURE



TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing |
Assembly | Installation | Commissioning | Support

Featured Projects

SC DC PROJECT – SCORPIO CARGO Line for Mungi Engineers Ltd. Nashik

- FLOOR LADDER FIXTURE FLOOR
- INVERTION FIXTURE
- INNER MARRIAGE STAGE 01 REPOSTING FIXTURE



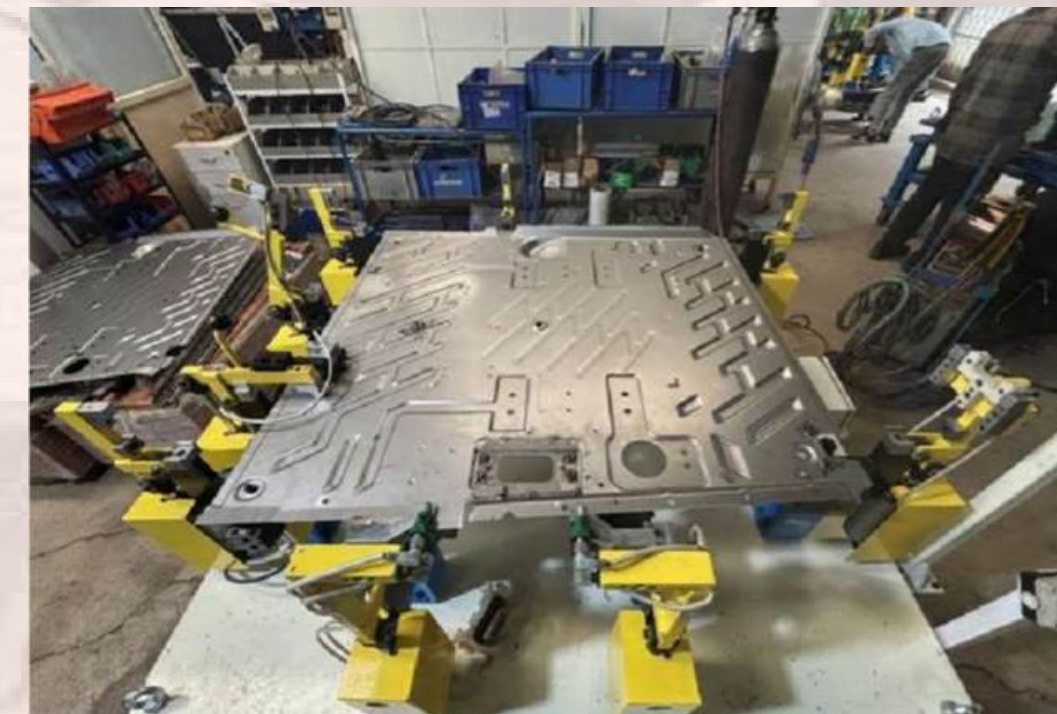
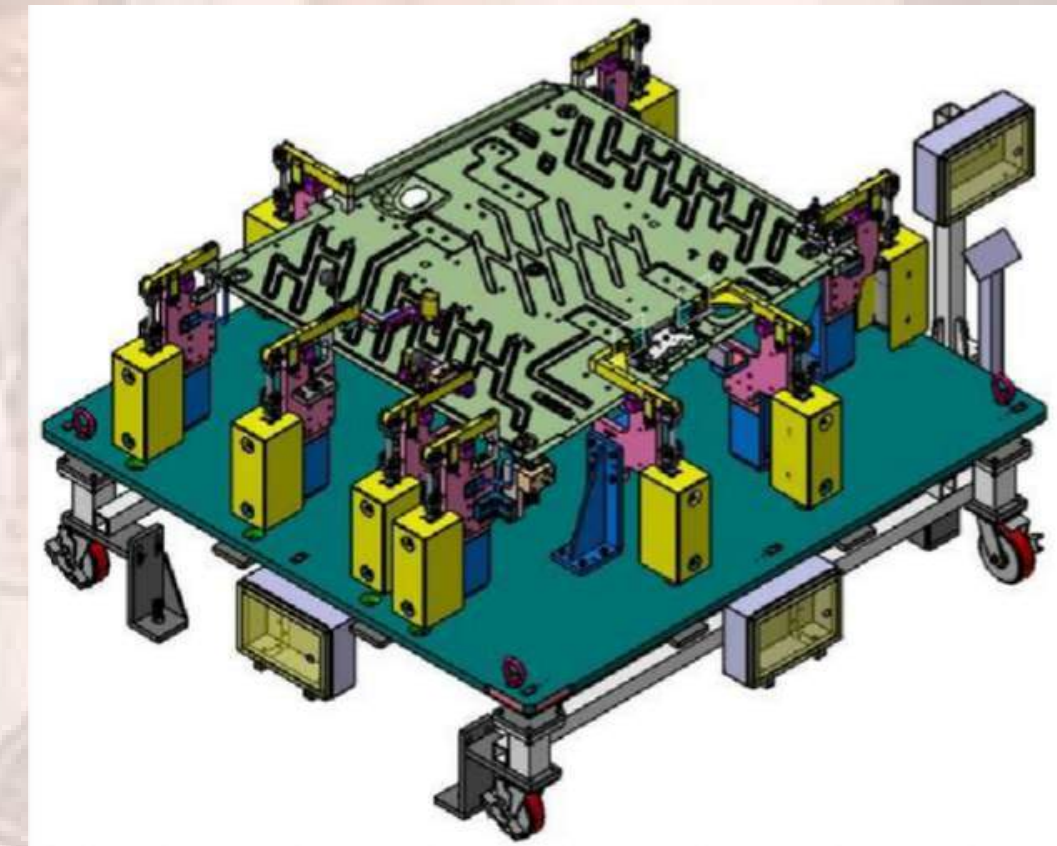
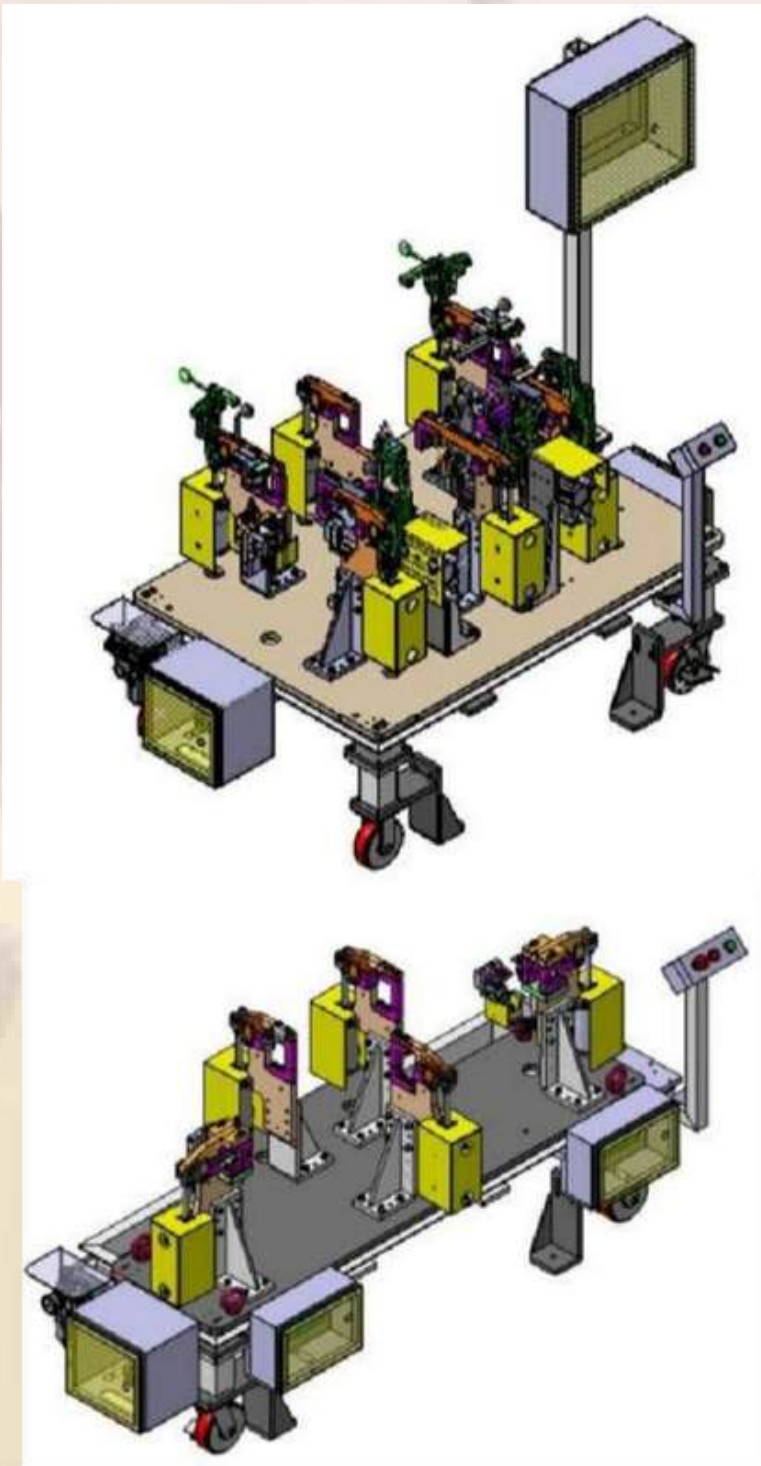
TURNKEY PRODUCTION LINESOLUTIONS

Overview

From Concept to Commissioning Engineering | Design | Manufacturing |
Assembly | Installation | Commissioning | Support

Featured Projects

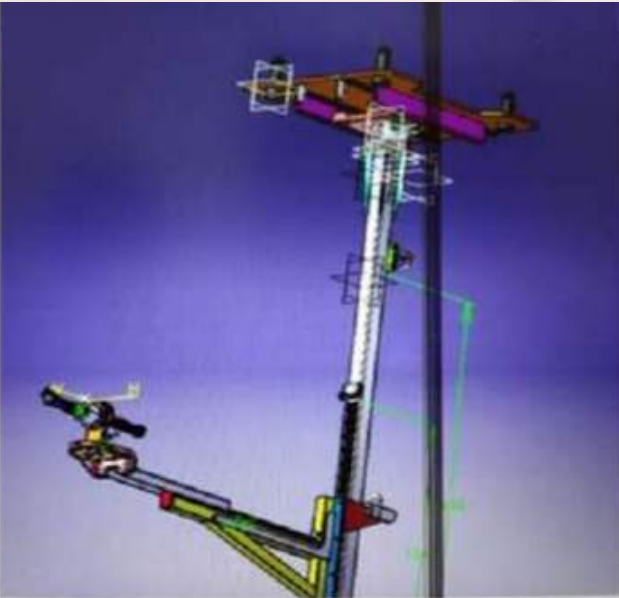
- A301 PROJECT – Fixtures Line of the complete Floor and Par tray for Mungi Engineers Pvt Ltd. Nashik



TURNKEY PRODUCTION LINESOLUTIONS

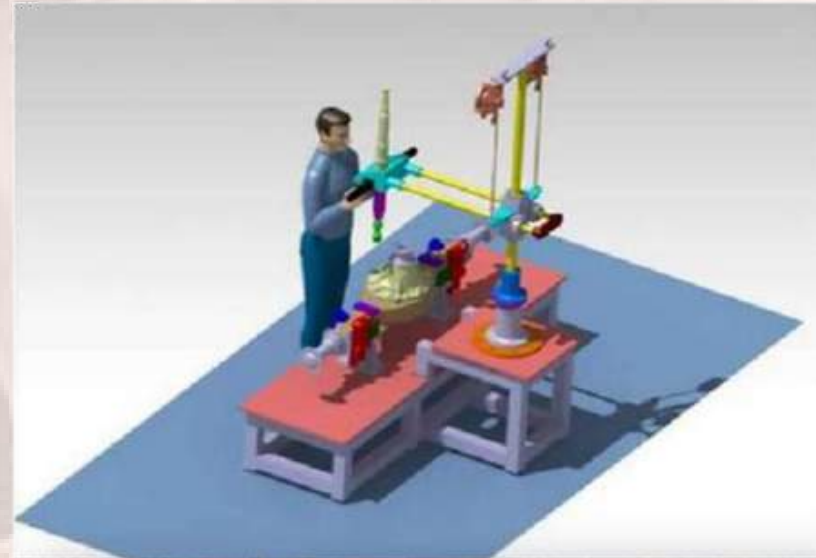
Overview

From Concept to Commissioning Engineering | Design | Manufacturing | Assembly | Installation | Commissioning | Support



Featured Projects

- Mahindra & Mahindra, Pune – Complete design and manufacturing of an Articulating Arm for a Production Line.
- Mercedes-Benz, Pune – Complete design and manufacturing of an Engine Head Assembly Torque Tube for a Production Line.
- Dana Corporation, Chennai – Complete Design & Manufacturing of Nut Runner for Automated Production Line.



AI,ML,IIOT& INDUSTRY4.0 SOLUTIONS

We provide end-to-end IT solutions, including enterprise software, AI, data analytics, IIoT, machine vision, and Industry 4.0 technologies, helping businesses improve efficiency, automate processes, and accelerate digital transformation.

- **Enterprise Solutions**

Custom ERP, CRM, MES, and business applications to streamline operations and improve productivity.

- **Digitizing Non-IT Manufacturing Operations**

Transforming manual shop-floor processes into smart, paperless, and digital workflows.

- **Industrial Intelligence & Automation**

Smart automation solutions integrating PLC, SCADA, IIoT, dashboards, and real-time production monitoring.

- **Agentic AI**

AI-powered intelligent assistants and autonomous workflows to enhance business efficiency and decision-making.

- **Data Science**

Building predictive models and extracting valuable insights from industrial and business data.

- **Data Analytics**

Interactive dashboards, KPI monitoring, and business intelligence for data-driven decision-making.

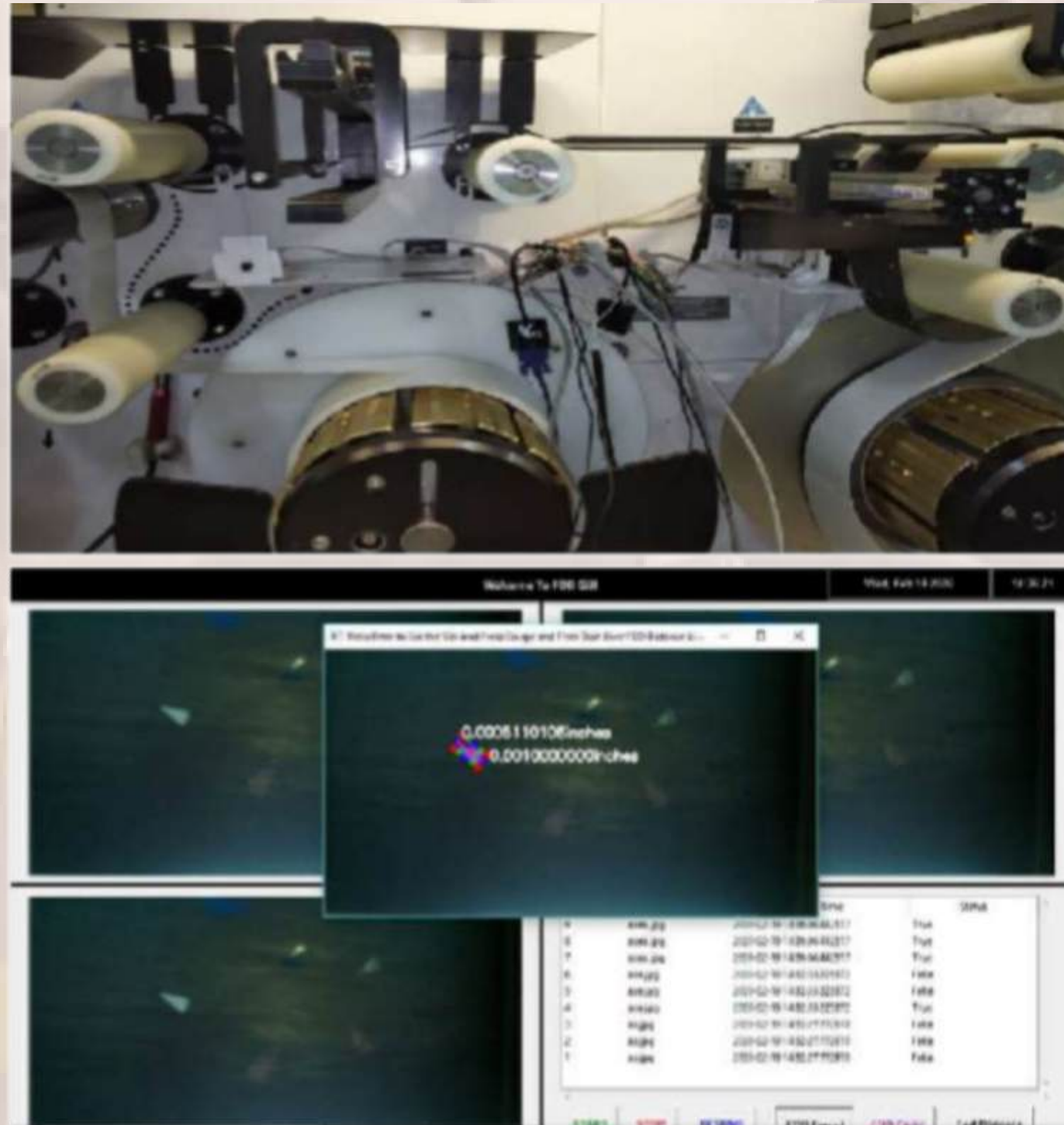
- **Machine Vision**

Advanced vision systems for automated inspection, defect detection, quality control, and production traceability.

AI,ML,IIOT& INDUSTRY4.0 SOLUTIONS

Overview

**Machine Vision • Smart Automation • Digital
Manufacturing • Industrial Intelligence**



Featured Projects

Tata Advanced Systems Limited (TASL), Nagpur

- Design, Development & Deployment of a Machine Vision-Based Foreign Object Detection System for Carbon Film Inspection using Color, Size & Quantity Analysis.
- Design, Development & Deployment of an Advanced Vision Inspection (AVI) System using Deep Learning for Automated Detection of Scratches, Dents, Part Markings, and LH/RH Part Identification



AI,ML,IIOT& INDUSTRY4.0 SOLUTIONS

Overview

Machine Vision • Smart Automation • Digital Manufacturing • Industrial Intelligence

Featured Projects

- Enterprise Software Solutions
- Industrial Digitalization
- Manufacturing Process Automation
- Agentic AI Solutions
- Data Science & Analytics
- Industrial Intelligence
- Machine Vision & Quality Inspection
- Industry 4.0 & IIoT Solutions



Learning Management System (LMS)



Dealer Management System



Sales Order System



Manual Operations & Paperwork



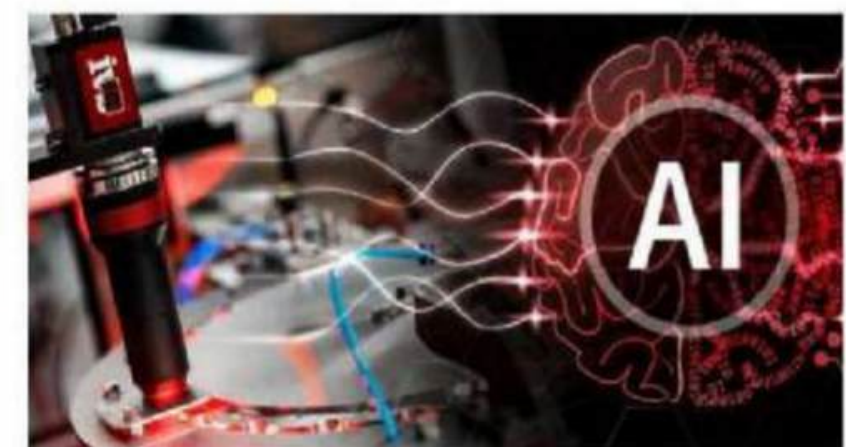
Electronic Quality Management System (eQMS)



Complaint Management System



ERP System



Data Compilation & Follow-Ups

TRUSTED BY INDUSTRY LEADERS



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THANK YOU

| We appreciate the opportunity to present our engineering capabilities and innovative solutions. At UVK, we remain committed to delivering excellence through precision, quality, and continuous innovation. We look forward to building long-term partnerships and creating value through our expertise.