Crevavi

Create, Embed, Empower

Mechanical Design Competencies

INDUSTRIAL ARM ROBOT

Product Description- An affordable, 6 Degrees of freedom (DOF) arm with configurable actuators.

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

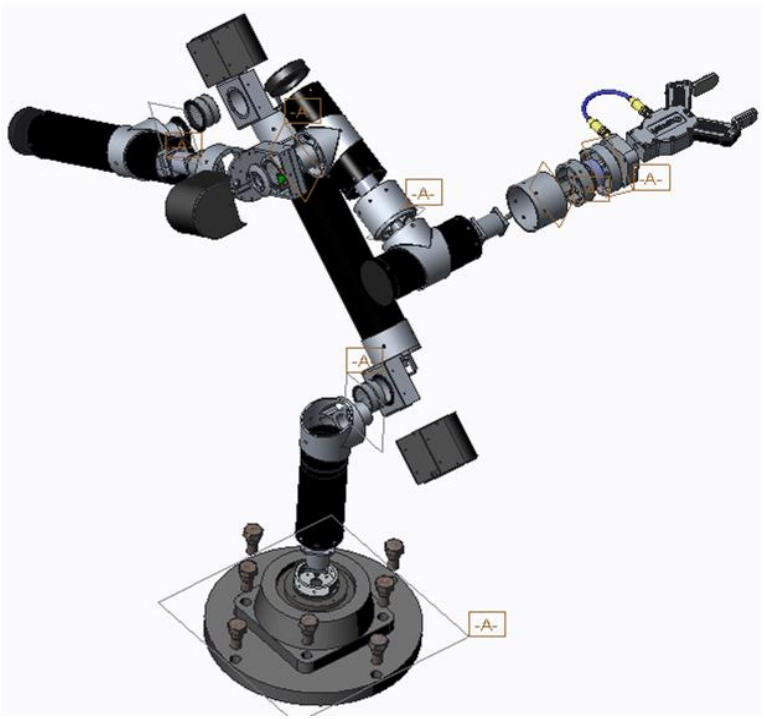
- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding (Carbon fiber and Plastic)
- Aluminium fabrication and Anodizing

Benefits-

- Engineering Simulation to assess and improve product performance
- Engineering drawings compliant to standards
- Advanced CAD skills to reduce BOM costs and production costs
- Conducted Finite Element Analysis for product design modifications.



AGV for SHOPFLOOR AUTOMATION

Product Description- AGV design

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

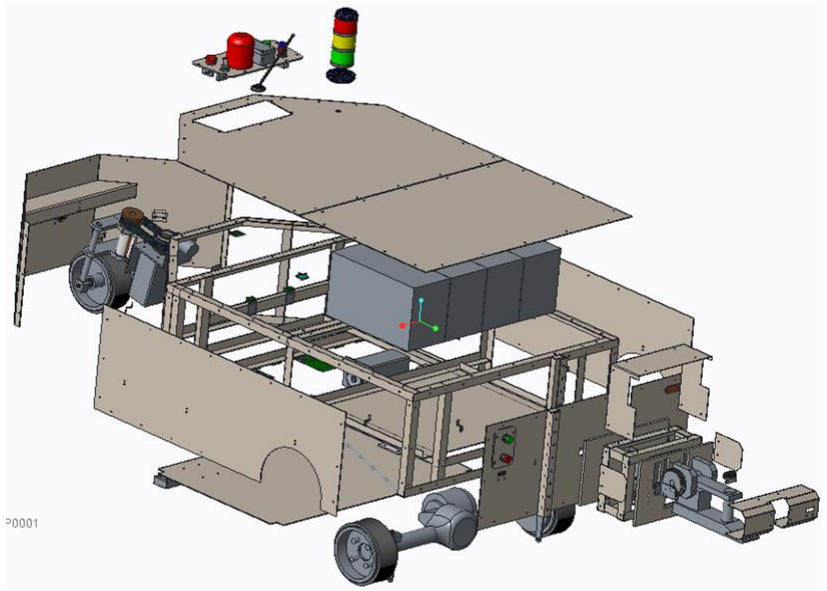
- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding

Benefits-

- Concept and detailed engineering design for cost estimations.
- Geometric dimensioning and tolerance (GD & T) to blueprints
- Tolerance analysis
- Design for manufacturability with optimal costs



DESKTOP CNC MACHINE–

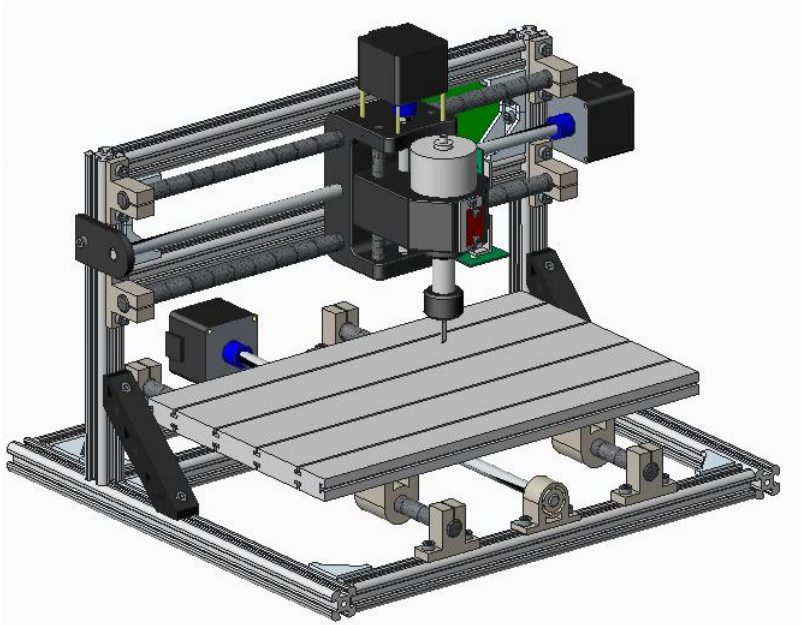
Product Description- Digital Twin

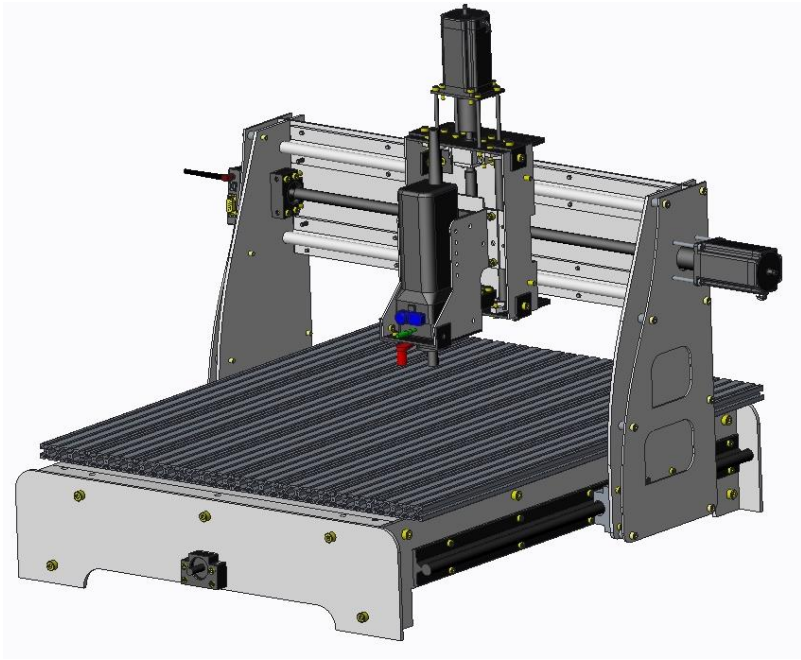
Design-

- Build parametric 3D models of parts and assemblies using PTC Creo 3.0 CAD software
- Animation Tool used
- **Key shot -3** for rendering

Benefits-

- Downtime reduction
- Operational efficiency
- Product improvements
- Improve customer experience
- Optimize service capabilities
- Consistent product quality





CNC MACHINE–

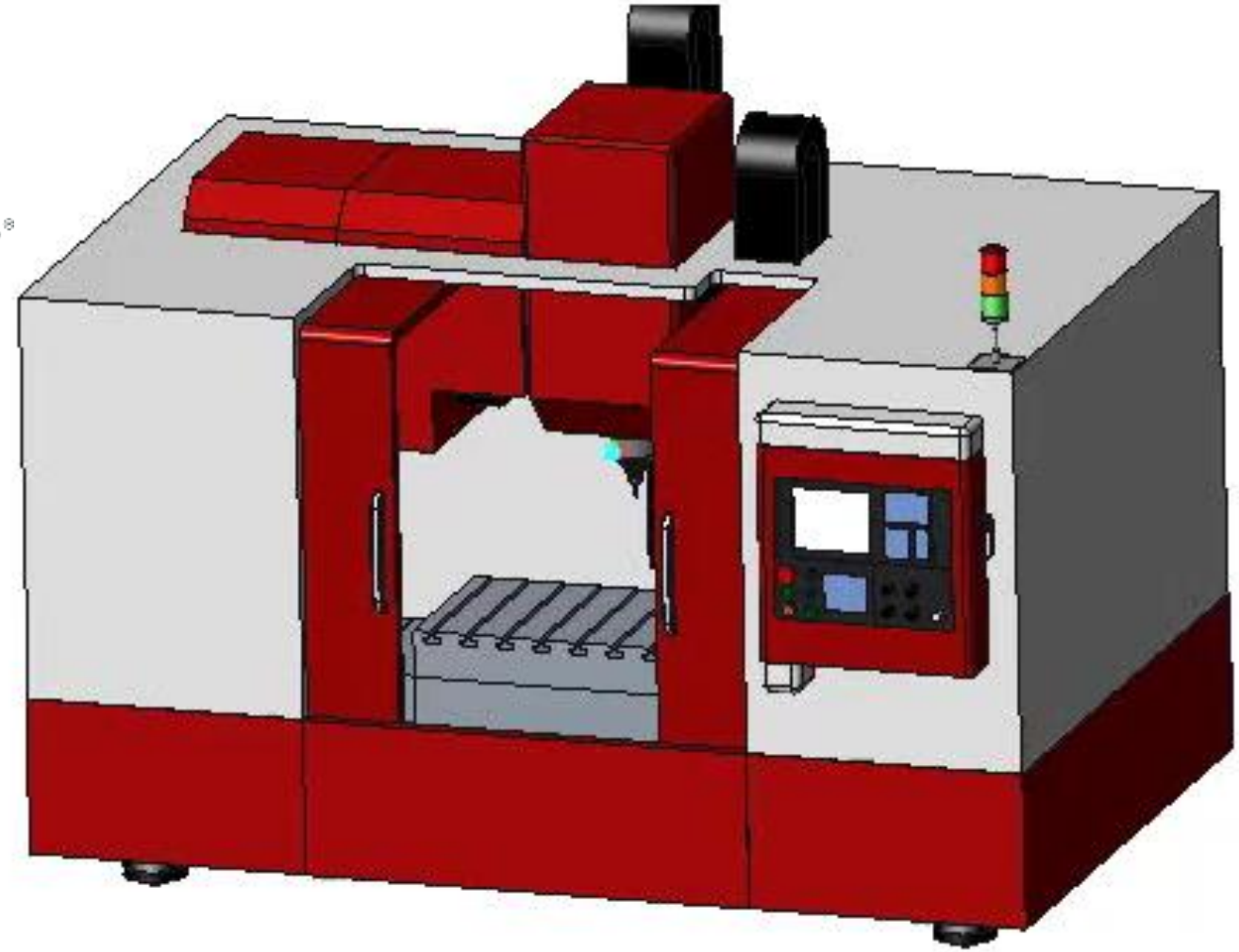
Product Description- Digital Twin

Design-

- Build parametric 3D models of parts and assemblies using PTC Creo 3.0 CAD software
- Animation Tool used
- **Key shot -3** for rendering

Benefits-

- Downtime reduction
- Operational efficiency
- Product improvements
- Improve customer experience
- Optimize service capabilities
- Consistent product quality



PICKBOT–

Product Description- ASRS (Automated storage and retrieval system)

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

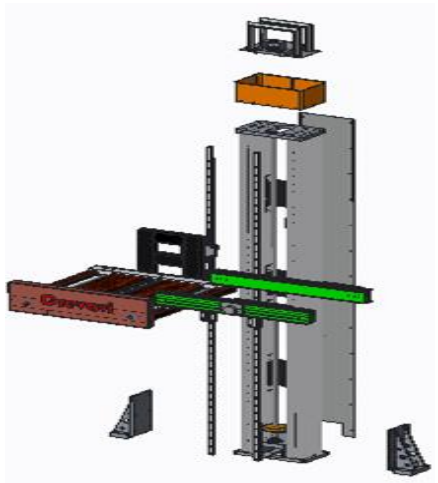
- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding
- Aluminium fabrication and Anodizing

Benefits-

- Mechanism design
- Concept and detailed engineering design for cost estimations.
- Geometric dimensioning and tolerance (GD & T) to blueprints
- Design for manufacturability with optimal costs
- Assembly management and performance



Medical device PICK & PLACE ROBOT–

Product Description- Pick and Place Robot

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

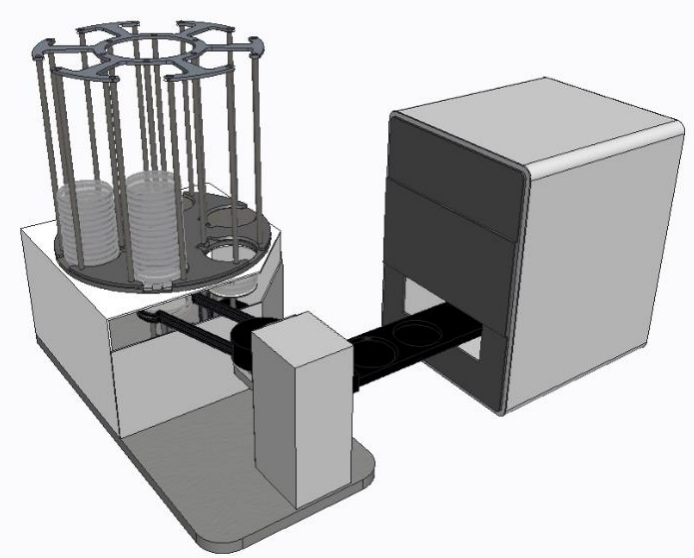
- ASME Y14.5 and ISO-8062

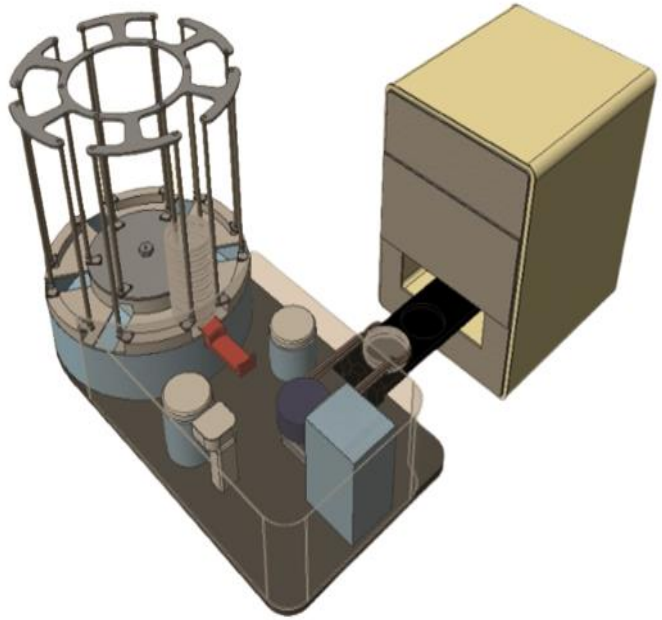
Process-

- Sheet metal fabrication and Powder coating
- Injection Molding

Benefits-

- Design for manufacturability with optimal costs
- Integrated Project Teams (IPTs) comprising multiple disciplines driving end-to-end design of components, sub-assemblies & systems
- Used CAD to optimize rivet length design by calculating displaced volume, thus minimizing time and effort during fabrication and installation.
- Mechanism design





360° TURN TABLE–

Product Description- 360◦ Turntable

Design-

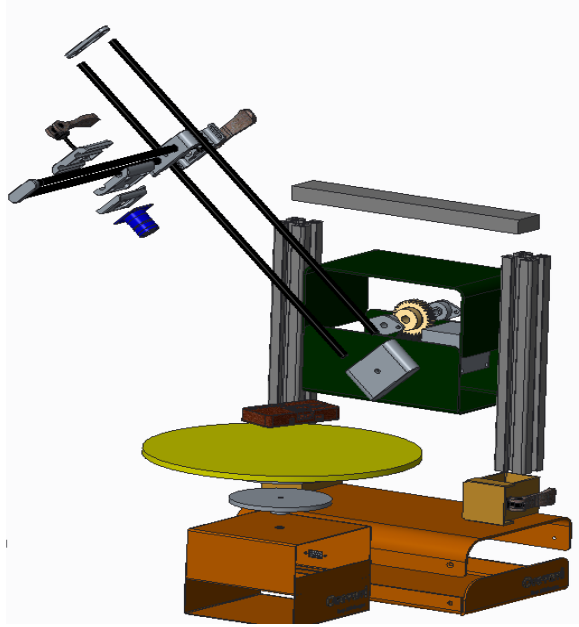
- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding (Carbon fiber and Plastic)
- Aluminium fabrication and Anodizing



Benefits-

- Design for manufacturability with optimal costs
- Coordinated activities concerned with manufacturing developments, scheduling and resolving engineering design and manufacturing issues.
- Rapid form factor design at best cost with plastics and sheet metals
- Simplifies composite part design and manufacturing allows to create strong, lightweight structures using diverse materials.

TURN BOT–

Product Description- 360◦ Turntable display stand for Photography.

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding (Carbon fiber and Plastic)
- Aluminium fabrication and Anodizing

Benefits-

- Design for manufacturability with optimal costs
- Increased productivity by creating engineering drawings when design phase of machinery was completed.
- Material testing machine, finished engineering drawings of components and assemblies.
- Creation of complex geometries, smooth curvilinear forms and assists in prototyping and manufacturing process.
- Geometric dimensioning and tolerance (GD & T) to blueprints

KONNECT G–

Product Description- IoT device

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating

Benefits-

- Design for manufacturability with optimal costs
- Create either a flat sheet or a multiple bended sheet part using a single command
- Automatically attach material information to the part when you select the desired material
- Geometric dimensioning and tolerance (GD & T) to blueprints

SRITAG–

Product Description- Tracker Device

Design-

- Build parametric 3D models of parts and assemblies using **PTC Creo 3.0** CAD software
- DFM : Design for manufacturability, Design for assembly.
- **Key shot- 3** for rendering

Quality Process-

- ASME Y14.5 and ISO-8062

Process-

- Sheet metal fabrication and Powder coating
- Injection Molding (Plastic)

Benefits-

- Design for manufacturability with optimal costs
- Coordinated activities concerned with manufacturing developments, scheduling and resolving engineering design and manufacturing issues.
- Full pilot production, in small volumes. Used to finalize manufacturing processes, assembly assessment and production tooling.
- Advanced CAD skills to reduce BOM costs and production costs