



## Custom Machinery

**Kinetic Machine Development specializes in the design and manufacture of custom machinery for automated and semi-automated assembly systems.**

A total system approach drives system design and development efforts. Lean manufacturing principals are incorporated into machinery designs using the latest technologies such as bar code scanning, machine vision and servo motion control.

Benefits of KMD designs are: increased manufacturing efficiencies, higher production rates, decreased manufacturing part failures, increased repeatability and improved process control.

### Areas of Expertise

- Automated and Semi-Automated Assembly
- Lean Manufacturing Cell Design
- Machine Vision Integration
- Motion Control
- Inspection & Testing Systems

### Principal Industries Served

- Medical
- Packaging
- Automotive
- General Manufacturing
- Pharmaceutical
- Food
- Consumer

### OEM Services

- Control System Design and Upgrades
- Motion Control and Machine Vision Integration
- PLC and HMI Program Development
- System Integration
- Servo Retrofits
- Machine Modifications
- Control Panel Design and Build



Both the St. Louis, MO and Rochester, NY facilities provide design and machine fabrication services. Call (314) 997-6606 or email [KMDsales@kineticmd.com](mailto:KMDsales@kineticmd.com) to arrange a consultation with our technical experts.

# Custom Machine Design

Use KMD's Engineering expertise to design and fabricate custom machines for the assembly, testing, material handling and packaging of your products. The latest 3D modeling techniques are used to design, analyze and verify machine operation. Prior to component purchase, simulations and analyses are performed to verify the machine design. During the review phase, 3D models are presented for evaluation and for design approvals.

## Machine Design Areas

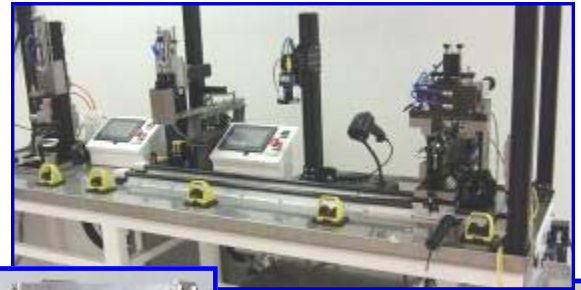
- Assembly Cells for Lean Manufacturing Systems
- Stand Alone Assembly Machines
- Multi-Station Assembly Machines
- Pick and Place Units
- Auto Load/Unload Stations
- Auto Sorting and Stacking Units
- Auto Packaging Systems (Weigh and Shrink-Wrap)
- Quality Inspection Systems



## Documentation

Comprehensive documentation packages include:

- Operator & Maintenance Manuals
- Spare Parts List
- Bill of Materials
- Electrical Schematics
- Controller Program Code
- All OEM Documentation
- Software Licenses
- Detailed Control Panel and Assembly Drawings

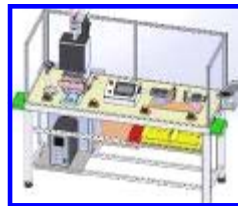
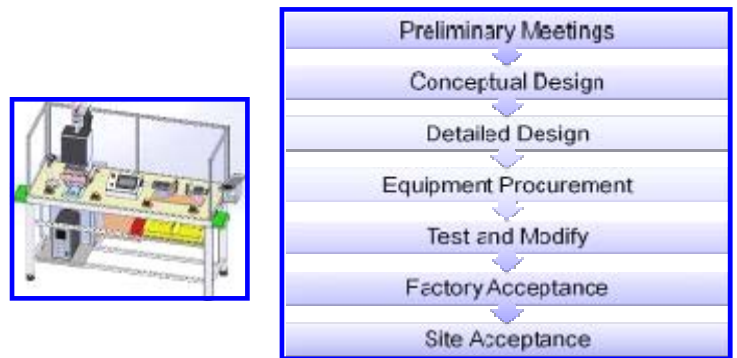


## Solutions to Meet Your Expectations

Building custom machines and integrating equipment is complicated. Without a high level of communication between the designers and you, it is very easy for a delivered solution to not meet requirements.

To ensure that **all** aspects of the machinery design and build meet your expectations, we use a proven **7 phase design methodology**. As a team, this helps us achieve the highest level of project success.

### 7 PHASE DESIGN METHODOLOGY



### THE KMD ADVANTAGE

- Expertise Built on Experience
- Quality Commitment
- Single Source Solutions
- Innovative Technology
- Commitment to Your Success





## Motion Control Integration

With over 28 years of designing and applying motion control products and systems, KMD delivers the optimal solution for your manufacturing needs. Our applications engineers are highly experienced in specialized motion control.

### Benefits of Integrating Motion Control

- Improved Production Rates
- Improved Quality
- Reduced Downtime



## Machine Vision Integration

Benefit from our expertise in vision system, design, application development and integration. Rely on KMD as your single, qualified point of contact for all your automation needs.

### Vision System Applications

- Vision Guided Motion Control
- Inspection
- Counting
- Assembly



### KMD Vision Systems Experience

- Keyence
- Teledyne DALSA
- Cognex



## PLC & HMI Program Development

KMD provides PLC and HMI programming capabilities for OEM upgrade projects. Automation solutions based on extensive control system knowledge are designed and built to exceed your demands.

Using proven standards, our objective is to provide code that your technicians will understand. This enables them to independently troubleshoot problems and minimize production downtime.

### Benefits of Automating Your Process

- Improved Quality
- Improved Productivity
- Profitability Monitoring
- Downtime Reduction
- Display of Real-time Process Information
- Historical Data Collection and Analysis
- Alarm Detection and Annunciation
- Secure, Restricted Access
- Event Logging & Redundancy
- Recipe Management
- Reporting
- Networking





## Control System Design and Upgrade

As the pace of technology continues to escalate, your demands for improved productivity also increase. The KMD Systems Engineering group is knowledgeable of the latest hardware, software and networking topologies. These range from PLC systems to wireless technologies and beyond. Control systems are designed and built upon open architectures, using proven tools to provide real-time data in a robust and secure environment.

Engineers experienced with the IEC 61131-3 programming standard for automation, design the code for control systems that meet this standard.

Once your control system design is optimized, panels are built to exacting specifications in our UL 508A certified panel shop.

## Machine Retrofits

Design and implementation of machine modifications, mechanical conversions and complete subsystem redesigns are another KMD specialty. Modifications prolong the life of equipment and systems, increase flexibility and enhance productivity.

A dedicated engineering and assembly team will work with you to meet all of your machine modification requirements.

### Benefits of Retrofitting Existing Machinery

- Prolonged Equipment Life Cycle
- Reduced Cost vs. Replacement Costs
- Decreased Downtime
- Process Monitoring Capability
- Reduced Manufacturing Cost



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## Servo Retrofits

Capital equipment can become technically outdated or inefficient. A servo retrofit provides features and options that were not available on the original machine, yielding improvements in speed, reliability, safety, productivity or ease-of-control. By upgrading worn or outdated equipment with the latest technology, servo retrofitting increases performance approaching "new machine" capabilities. This increases the return on your original equipment investment.

### Benefits of Servo Retrofits

- Increased Productivity
- Improved Quality
- Reliability
- Reduced Downtime

## Custom Service Programs

If you require special support and/or maintenance service, custom service programs are tailored to your needs. Typical programs include 24-hour access to service personnel, extended warranty periods and "Same day" response programs.

