

Machine Design, Mechanical Engineering & Electrical Engineering

Machine & Equipment Designed to Meet Today's Global Standards

Industry leaders have learned that to maintain a competitive advantage in the global marketplace you must continually improve your operation. But efforts to implement change must be weighed against the constant pressure of lower margins, higher demand, and what seems to be a continually shrinking pool of resources. Deaton Engineering can help by integrating technology solutions while you stay focused on core competencies. We can even integrate production data directly into your ERP system to provide real-time analysis capabilities.

Well engineered solutions are a necessity to stay ahead of the efficiency curve. The experts at Deaton Engineering can design, build, install, and validate custom equipment to help your plant work smarter. We use off-the-shelf equipment and open standards whenever possible to create solutions that can evolve over time. We find the best solution to your problem by not promoting component manufacturers. Our products can be designed to meet global regulations and required certifications including UL, CE, ANSI and others. We understand the impact of regulatory requirements and design equipment with validation and compliance in mind.



SolidWorks Certified Professional

Design, Simulate, Build, and Test

Turnkey Machine Design and Build

Deaton Engineering designs and builds custom equipment for many industries from pharmaceutical to heavy machinery. We design turnkey machines, enclosures, electrical systems, mechanisms and process controls. Our custom equipment is designed to be easy to install, operate, and maintain with minimal engineering support. Our goal is to lower your cost of ownership by minimizing training, operator intervention, downtime, and revalidation.

Customized Electrical Equipment & Electronics

Certain solutions simply cannot be implemented using only off-the-shelf equipment. Whether it is a straightforward design involving signal conditioning or a more complex design involving full wireless data transmission, Deaton Engineering can provide complete design and build services. Our electrical engineers design custom components including control panels, cable harnesses, electrical drawers, signal conditioning, AC/DC power distribution blocks, wireless devices, low-power embedded controllers, data acquisition units and machine safety circuits. Deaton Engineering uses the latest methodologies and design practices, allowing for more efficient and low-maintenance designs. Our in-house PCB capabilities (schematic capture, layout, procurement, assembly & test) cover multi-layer, high-speed, low/high power, and small footprint designs (i.e., BGA). This results in finished products ranging from single-layer interface boards to multi-layer high-speed ARM-based microcontroller units; from large electromechanical relay boards to miniaturized wireless devices.

Designed for Good Manufacturing Practices (GMP) & Validation

To ensure our designs meet current GMP requirements, we follow the GAMP life cycle model for automated systems to facilitate validation. We design and build individual pieces of equipment or complete manufacturing lines to automate and improve the manufacturing process.

Machine Design, Mechanical Engineering & Electrical Engineering Services

- Mechanical engineering
- Electrical engineering
- Power usage design & management
- Embedded systems
- Machine design
- Equipment design
- Machine safety & machine guarding
- Servo & stepper motors
- Motion control, linear actuators
- OSHA & ANSI design
- Machine vision
- Electronic engineering
- Electromechanical design
- Industrial control
- Design for quality & validation
- Cable & connector design
- Electrical system integration
- Chassis, enclosure, and panel design
- Rugged & hardened design
- Sheet metal & plastic design
- International standards; CE, UL, & RoHS
- Parametric design
- Software & controls systems
- Measurement & inspection systems
- PLC, HMI and computer control
- Industrial robots
- Process and manufacturing equipment list
- Engineering services list
- Manufacturing services list
- FDA, regulatory and safety services list