



## Machine Safety Solutions

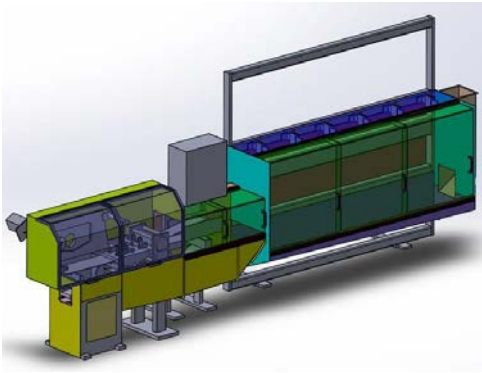
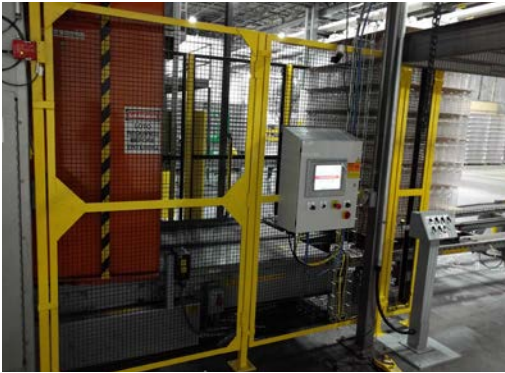
Design Group is a premier supplier of new and retrofitted machine safety system solutions for equipment across a broad range of industrial manufacturing industries. For over 30 years, Design Group has delivered successful engineering solutions to the industry's leading companies.

As the industry trend increases focus and capital prioritization on the safety of the manufacturing environment, Design Group can provide a custom solution to meet your safety needs, putting the safety of your people first. We have an experienced team and a nationally supported program with a robust set of standards for compliance and consistency for our clients across all regions and industries.

### Complete Safety Solution

- Overall Program Management
- Master Safety Specification Creation
- Safety Functional Requirement Specification Creation
- 3rd Party Risk Assessments
- Onsite Safety Guarding & Controls Audit
- Detailed Electrical Safety System Design
- Detailed Mechanical Guarding Design
- Safety System Controls & Hardware
- 3rd Party Safety System Validation
- Site Installation Management & Startup Support
- Vendor Coordination

## Machine Safety Solutions



### Industries

- Beverage
- Dairy
- Food
- Household & Personal Care
- Life Sciences
- Industrial
- Chemical

### Our Professionals

- 45+ Design Group Offices
- CMSE® Certified Machinery Safety Experts
- Machine Safety Project Managers
- Machine Safety Controls SME's
- Machine Safety Controls Design Professionals
- Machine Guarding Design Professionals
- Machine Safety Site Execution Professionals

### Safety Program Approach

#### Phase 1: Site Audit & Risk Assessment

- Initial/Current Risk Rating
- Conceptual Remediation Plan for Risk Reduction
- Budgetary Estimate for Execution

#### Phase 2: Detailed Engineering Design

- Detailed Machine Safety Controls & Guarding Design Solution
- Complete Safety Solution Pricing

#### Phase 3: Execution & Validation

- Contractor/Project Management
- Functional & I/O Checkout
- Functional, I/O, Induced Failure Validation
- Installation & Startup Management

### Safety Expertise

- Safety Standards Knowledge (ISO 12100, ISO 13849, EN 62061, ANSI B11)
- Master & Functional Requirement Safety Specifications
- Standard Operating Procedures Development
- Safety Category, Performance Level and/or Safety Integrity Level
- Safety Solutions Partnership for 3rd Party Validation
- Safety Platform Solutions in Allen-Bradley, Siemens, SICK FlexiSoft, and others
- Small Single Function Safety Relay Systems to Large Multi Zone/Machine Safety Control Systems utilizing a Safety PLC
- Alternative Means to Lock Out Tag Out
- Custom Machine Guarding Design
- 3D Modeling & As-Built Rendering
- In-House Control Panel Fabrication

### Safety System Design

#### Safety System Control

- Layered Above Existing Machine Controls
- Integrated Safety & Machine Controls
- Safe Limiting Speed Monitoring
- Pneumatic & Hydraulic Isolation

#### Safety System Hardware

- Non-Contact & Locking Gate Switches
- Light Curtains, Safety Mats & Scanners
- Multifunctional Access Safeguards
- Trapped Key Solutions
- Emergency Stops
- 2-Handed Jog Control
- Safe Torque Off VFDs

Design Group operates from 45+ offices in the US and India providing engineering, consulting, and technical services to the world's leading companies in the Food & Beverage, Life Sciences, Advanced Technology, Industrial, and other market sectors. Our nearly 1500 technical and engineering experts have direct industry experience in industrial automation, control system integration, facility and process engineering, architecture, construction management, regulatory compliance, enterprise technology, and other consulting services.