



DESIGNER'S EDGE, Inc.

A

The Challenge:

International manufacturer uses high-speed, cam-driven machines with exposed gears to synchronize dies and form the fasteners from coils of steel. Constant operator attention is required to assure quality output from the 18 machines which are closely positioned to minimize wasted space on the plant floor.

Injury and hazard potential is a constant threat since operators continuously monitor and regularly attend to the machines. Safety concerns are multiplied with adjacent machines as potential hazards.

B

Assessment

Designer's Edge, Inc. (DEI) assesses machine operations and overall facility layout to understand hazard areas, how the operators maintain the machines, raw material usage and finished product output. The close proximity of the machines makes this work uniquely challenging.

D

Control System Specialization

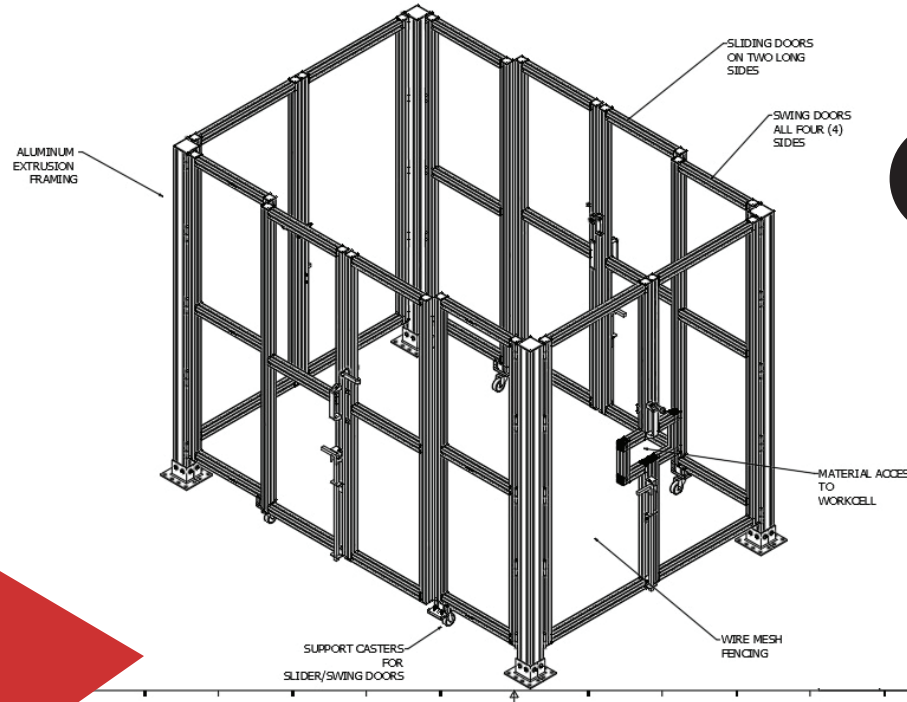
DEI custom-designed a control system assuring machines cannot operate when any of the four doors are opened with an override mechanism allowing the machine to operate in a manual/jog mode as long as the operator carries a Jog Pendant. This provides the flexibility needed for machine adjustments while maintaining safety during ongoing production operation.

E

Outcomes

Synchronized installation of all guarding and controls for 18 machines occurs over two weeks. The plant has a portion of the machines in continuous operation, resulting in a minimal scheduling impact. Limiting access to the machines while in operation increases the machine safety rating, saving the company money by:

- Raising the machines safety level above state and federal OSHA standards thereby mitigating the risk of being fined.
- Eliminating operator access to machines while running in auto mode.
- Increasing production due by implementing No-Access, No Injury Operations.
- Shielding exposed gears and making the production department easier to navigate.
- Increasing the time machines are in service since significant downtime for incident investigation is negated.
- Reducing/eliminating the need for emergency medical care and lost wages due to incidents.
- Eliminating the need for litigation and settlements. This is the single largest area for savings.



C

Safety Systems Engineering

A specially-engineered, four-sided fence system is the basis of the DEI solution. Doors on all four sides can be opened for complete access around the machines. A specialty feature on the side doors of the machine is a combination of swing/slider doors. This configuration enables a large opening to the side of the machines and only minimal space is needed in the aisles between machines.