

A close-up photograph of industrial machinery, featuring a prominent yellow vertical frame and various mechanical components like hoses and bolts. The image is partially obscured by a large blue diagonal graphic on the left side.

Controlled Motion Dynamics

PRODUCTS & CAPABILITIES

Your Single Source for Pneumatic, Hydraulic, and Electrical Solutions

CMD specializes in designing and implementing custom solutions that meet your specific needs.

Our expertise in pneumatics, hydraulics, motion control and custom programming allows us to offer the best solution to a wide range of automation applications. CMD has access to a broad choice of automation product lines and we are committed to offering the most cost-effective solution available. From simple sub-assemblies to complex multi-motion PLC programming, CMD offers the most appropriate answer for you.



Electrical



Pneumatic



Hydraulic

Our Partners

CMD is your partner for electrical, hydraulic, and pneumatic solutions.
We leverage industry-leading brands to deliver exceptional results.

Kollmorgen

Servo
(Drives, Motors,
Controllers)

Tolomatic

Linear Actuators
Steppers
Servo

Danfoss

VFD

WEG

Electric Motors
VFD

Pinnacle

Safety Controls
(Light Curtains, Mats,
Pull Cords, etc.)

Proportion-Air

Hydraulics
Pneumatics

Other Brands
We Work With:

Allen-Bradley

C-More

Direct Logic

EZ Automation

KOLLMORGEN

A REGAL REYNOLD BRAND

Tolomatic™

EXCELLENCE IN MOTION

Danfoss

WEG

PINNACLE

SYSTEMS, INC.

PROPORTIONAIR

80/20®

BUILD YOUR IDEA

Electrical Solutions

Beyond hydraulics and pneumatics, Skarda offers comprehensive electrical solutions to elevate your motion control systems. Our team seamlessly integrates electrical components, ensuring precise control, efficient operation, and optimal performance.

[Explore All Case Studies >](#)

Electric Servo Press [Project PDF >](#)

We have solved multiple electric press needs for unique customers, providing a quieter operation and greater functionality.

Electric Walking Beam [Project PDF >](#)

We provided a fully automatic cooler walking beam system in which the operator only needs to select which rails to load.

Electric Reject [Project PDF >](#)

We provided a Linmot linear servo motor capable of speeds required by a customer needing a high-speed reject actuator for their hamburger chub line.

Heat Sensing Weld Tester

[Project PDF >](#)

Our customer required a system to verify welding completion before proceeding to the next assembly stage, ensuring quality and preventing faulty products.

Small Actuator [Project PDF >](#)

Our customer required a compact actuator to position a light filter in front of a projector. The actuator needed to meet specifications for stroke length, speed, and compatibility with the existing control system.

Waste Water Centrifuge [Project PDF >](#)

We offered an effective, low-cost solution for ensuring control in a wastewater application centrifuge.

Two Axis Chamfer Machine

[Project PDF >](#)

A pellet mill manufacturer required a new machine to replace an obsolete piece of equipment.

Tube Mill Controls [Project PDF >](#)

An irrigation equipment manufacturer had a tube mill with an obsolete control system.

Brake Press Guarding [Project PDF >](#)

Our customer urgently required safety guarding for multiple brake presses from various manufacturers due to a recent accident. CMD provided reliable, tailored solutions to prioritize safety.

Conveyor Control Panel [Project PDF >](#)

Our customer required a new conveyor control panel due to the retirement of their previous operator and the loss of existing panel documentation.

Gear Shaper [Project PDF >](#)

A manufacturer of large gear transmissions needed to modernize a machine that cuts teeth into circular gear blanks, requiring precise rotation of both the blank and the cutting tool.

Wax Centrifuge [Project PDF >](#)

A wax manufacturer sought a solution to recycle used wax by separating solids from the liquid, enabling reuse in their molding processes.

Filter Head Sorter [Project PDF >](#)

CMD was tasked with revamping a malfunctioning filter head sorting machine. The machine required sorting and orienting filter heads of various sizes, ensuring each had threads. CMD collaborated with Tri-V Tool and Die for mechanical modifications and handled all control system upgrades.

Three Axis Servo Control

[Project PDF >](#)

A major candy manufacturer approached CMD to address a critical motion control issue with their Aasted Mikroverk FCT depositor. We developed a replacement solution that closely mirrored the original operation, preserving existing menus and minimizing disruption for operators.



Precision Control

Achieve peak accuracy and repeatability with expertly designed electrical control systems.



Seamless Integration

Bridge the gap between your mechanical and automation needs with our electrical expertise.



Enhanced Efficiency

Optimize performance and minimize downtime with reliable electrical components and integration.

Pneumatic Solutions

Skarda is more than a supplier of pneumatic components. We specialize in designing and integrating custom solutions. From efficient material handling systems to precise testing equipment, our team delivers reliable and innovative solutions tailored to your specific needs.

[Explore All Case Studies >](#)



Sheet Picker [Project PDF >](#)

Our customer struggled with inefficient panel movement using an overhead crane. CMD developed a machine to transport multiple panels and release them individually, improving overall efficiency.

Tank Tester [Project PDF >](#)

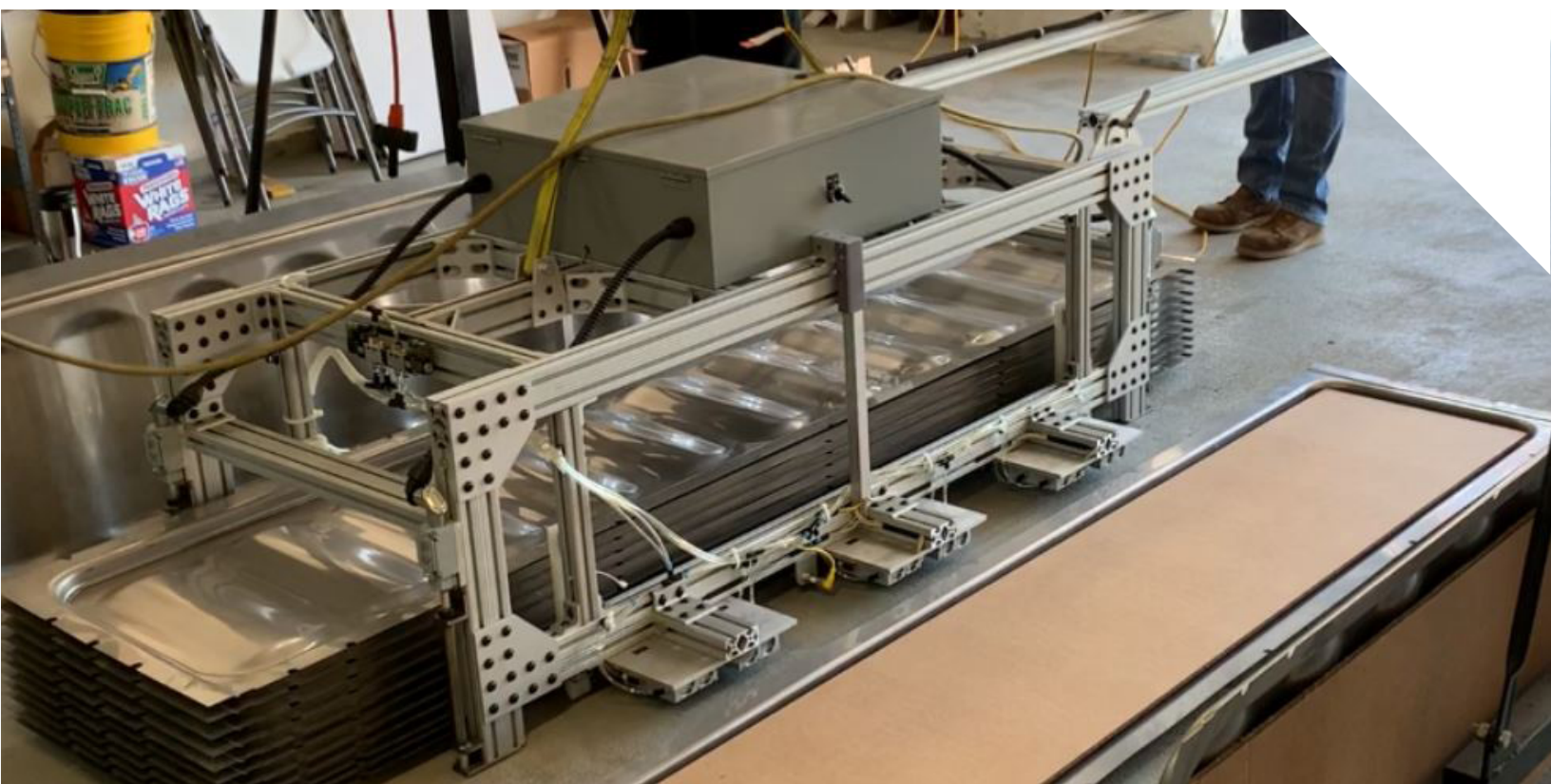
Customers needed a safe way to pressurize large tanks to check welds. CMD provided a GAST regenerative blower with custom programing to provide a system that will pressurize the tanks from 0-50 in/H2O.

CNC Unloader [Project PDF >](#)

CMD provided linear motion and programming expertise to a customer developing an automated CNC machine unloading system.

Bin Shuffler Tower [Project PDF >](#)

A manufacturing customer who specializes in specific parts assembly was experiencing quality control issues. In particular, managing the parts available to the assembly had become a problem for this manufacturer.



Hydraulic Solutions

From simple pump control systems to complex power units, Skarda provides tailored hydraulic solutions to meet your specific needs. Our team designs and integrates systems that enhance efficiency, drive productivity, and deliver superior performance.

[Explore All Case Studies >](#)

Power Unit with Reclaim [Project PDF >](#)

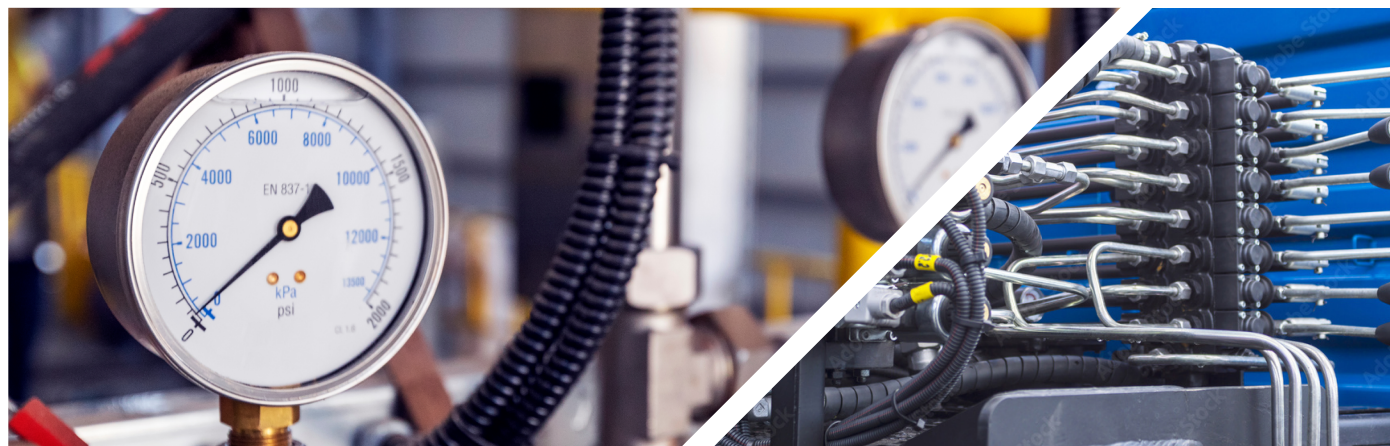
Our customer required a solution to test hydraulic components on combines. CMD delivered a custom hydraulic power unit with controls that seamlessly integrated with the combined 12VDC power system.

Bushing Press Project [Project PDF >](#)

A manufacturer sought a more consistent solution for pressing rubber bushings into automotive shock absorbers. While an all-electric solution was initially considered, CMD engineers recommended an optimized solution that combined hydraulic power with precise control to achieve the desired accuracy and speed.

Hydraulic Pump Control [Project PDF >](#)

Our customer required a large, multi-pump hydraulic system to power two separate production floors, including conveyors, dumpers, and other equipment. To reduce energy consumption, the customer sought a solution to operate only the necessary pumps based on varying demand throughout the day. CMD was tasked with designing an energy-efficient hydraulic system to meet these needs.



Stress Test Fixture [Project PDF >](#)

CMD worked with a local irrigation equipment manufacturer to develop a one-time-use center pivot stress test fixture to evaluate the structural integrity of the center pivot framework.

Parking Brake Tester [Project PDF >](#)

A heavy equipment manufacturer needed to test their hydraulic parking brakes, allowing them to find and correct faulty brakes before being installed on a machine.

Machine Safety Solutions

At Skarda, safety is paramount. We provide a comprehensive range of machine safety solutions, including risk assessments, robust guarding systems, and seamless integrations, to ensure the well-being of your operators while maximizing your production efficiency. By prioritizing safety, you minimize downtime and cultivate a more productive and secure work environment.

[Explore All Case Studies >](#)



Sink Test Station [Project PDF >](#)

CMD helped a customer enhance their spray bottle testing process by designing and building a custom sink test station. Utilizing an 80/20 frame, a diaphragm pump, and pneumatic controls, the new system improves efficiency and accuracy for pressure testing pick-up tubes.

Robot Cage [Project PDF >](#)

CMD partnered with a leading international robotics manufacturer to design and install a large-scale work cell for their new R&D facility. The work cell, built with a focus on strength, cost-effectiveness, and safety, provides a secure environment for the robotics equipment to perform experimental tasks while effectively containing hazardous metal projectiles.

Lung (Breathing) Project [Project PDF >](#)

The radiological department of a local hospital needed to be able to track tumors on the lungs of patients while the patients were breathing.

Speaker Assembly [Project PDF >](#)

CMD addressed a critical challenge for a manufacturer of high-end speakers. The existing assembly workbench relied on manual methods, including counting screw turns for tension and adjusting height with wooden blocks, resulting in inconsistent and imprecise results. The work cell, built with a focus on strength, cost-effectiveness, and safety, provides a secure environment for the robotics equipment to perform experimental tasks while effectively containing hazardous metal projectiles.

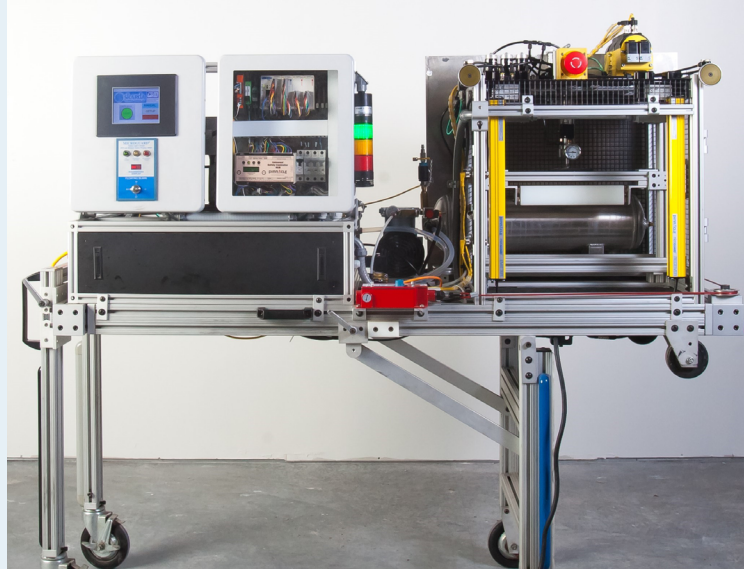
Security Cage [Project PDF >](#)

A midwestern pharmaceuticals company approached Controlled Motions Dynamics to help create a more secure drug storage area. The company sought to keep addictive prescription drugs in a safe area.

Skarda Safety Gurney [Project PDF >](#)

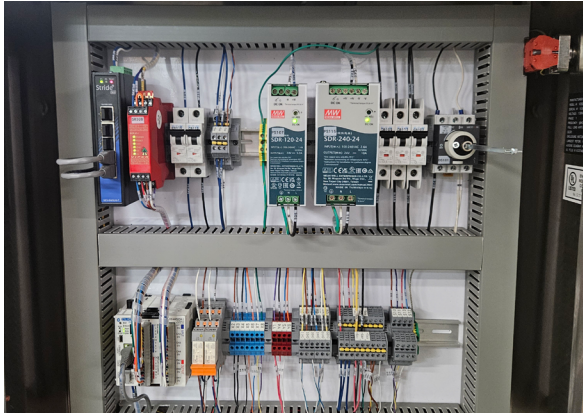
Our compact, transportable demonstration platform showcases the latest safety products from leading vendors like 80/20 and Pinnacle Systems. It features a fully operational pneumatic press showing how to enhance machine safety with a range of solutions, from basic hand guarding to advanced technologies such as light curtains and safety mats.

Schedule a free demo today! Contact your Skarda outside sales rep or call us at 800-228-9750.



Industrial Control Panel Certification

CMD's UL508 certification and adherence to the Industrial Control Panel Program guarantee compliance with critical safety and performance standards. By strictly following National Electric Code (NEC) and UL508 guidelines, we ensure the reliability and longevity of our control panels while providing our team with top-notch training.



Safety & Quality

Our UL508 certification signifies our commitment to safety and quality. By strictly following National Electric Code (NEC) and UL508 guidelines, we ensure the reliability and longevity of our products.



Increased Efficiency

We optimize panel production and installation processes to avoid costly red-tag issues and ensure timely project completion.



Broader Sourcing

Our UL508 certification allows us to source components from a wider range of suppliers, enhancing our flexibility in building UL-compliant control panels.



Comprehensive Training

Our UL508 certification provides our team with in-depth knowledge and skills.

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