



Custom Machinery and Automation



Automated Seat
Transfer System over
an auto assembly line

GIVENS
ENGINEERING INC

London Ontario

Manufactured in
Canada and
United States

GIVENS
LIFTING SYSTEMS INC

Toledo Ohio

We design!



4 Automated nutrunners for a car body part that spread out after passing through a small opening. This assembly is carried by an overhead crane.



Automated seat transfer showing a seat entering the system



Control panels for the above nutrunner system, including PLC

Every machine we manufacture **is created entirely in-house**, from design to machining to programming. Every design is unique for the situation at hand.

Every design **begins with creativity** to match your requirements. Drawings are always passed on to the customer for approval before anything is built. In most cases, the design is submitted to a Professional Engineer for strength analysis.

We design the **electrical system** to suit the requirements of the project and then build the panels, wire and program.

HMI interfaces are a routine part of any control system. We can program in a number of different PLC platforms.

Our staff includes an electrical Professional Engineer and licensed electricians.

Every job ends with **mechanical and electrical installation** by our experienced team.

Fixtures and Material-Handling Machinery



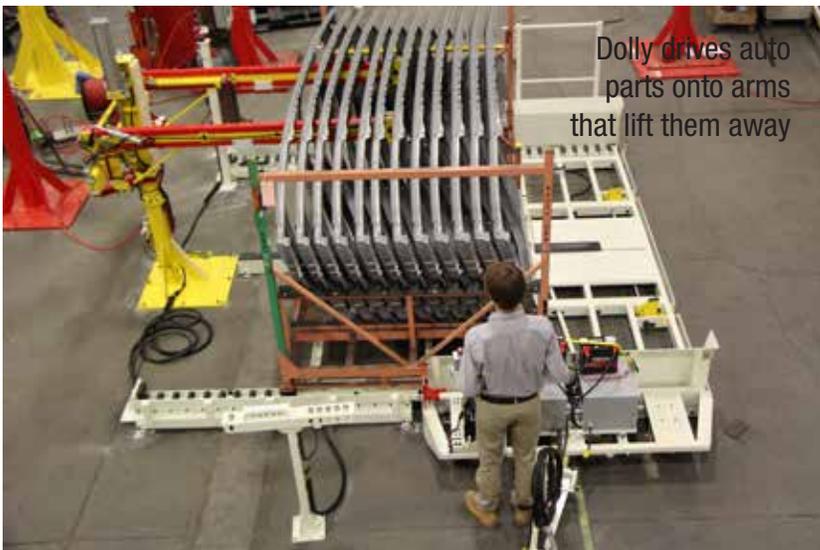
Automated truck-chassis transfer grips, lifts and transfers



Electrical cabinet assembly fixture mounted on a hydraulic lift



Aluminum sheet turner flips heavy stacks of metal 180 degrees upside-down



Dolly drives auto parts onto arms that lift them away



This device is jammed with electronic devices to sense position and force in an assembly process! Data is relayed to a PLC.

Custom-Built Conveyors

We design, manufacture and install a wide variety of conveyors. Every one is customized for the product to be handled.

Conveyors can be complex!

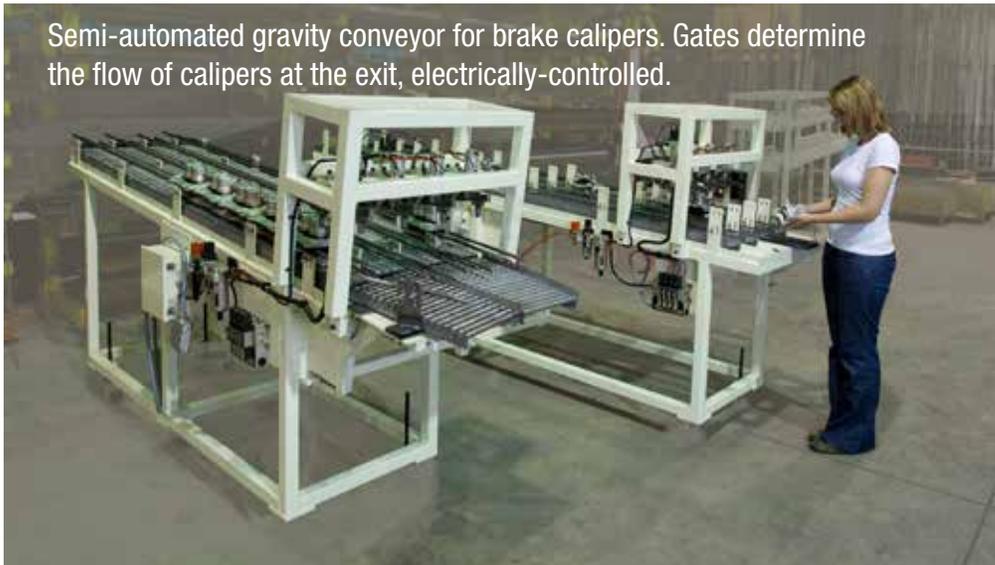
We offer gravity rollers, chain-driven live rollers, conveyors with gates and cross-stands, and automated conveyors.

Conveyors are often part of a system, coupled with cranes, manipulators, fixtures or automated machinery. Controls can be electric or entirely pneumatic.



Gravity conveyor for plastic bins with pneumatic pop-up rollers for cross-transfer

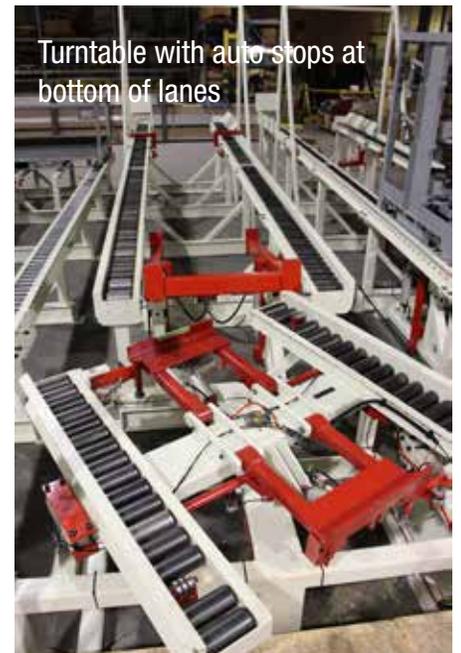
Semi-automated gravity conveyor for brake calipers. Gates determine the flow of calipers at the exit, electrically-controlled.



Gravity conveyors for heavy auto parts bins. A Givens Engineering manipulator stands in the background for handling the parts.



Turntable with auto stops at bottom of lanes



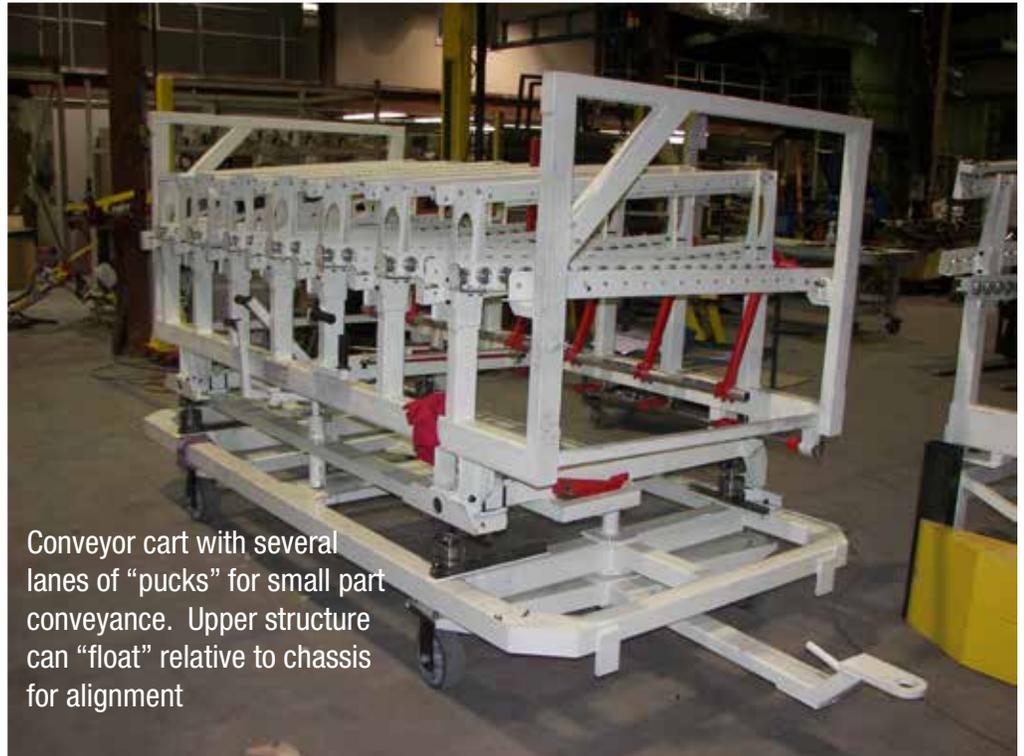
Conveyors

If your conveyor can be imagined, we can build it!

Our designers, welders, machinists and electricians have a wide range of experience with many types of conveyors.



Gravity conveyor strands for auto parts pins, loaded and unloaded by forklift

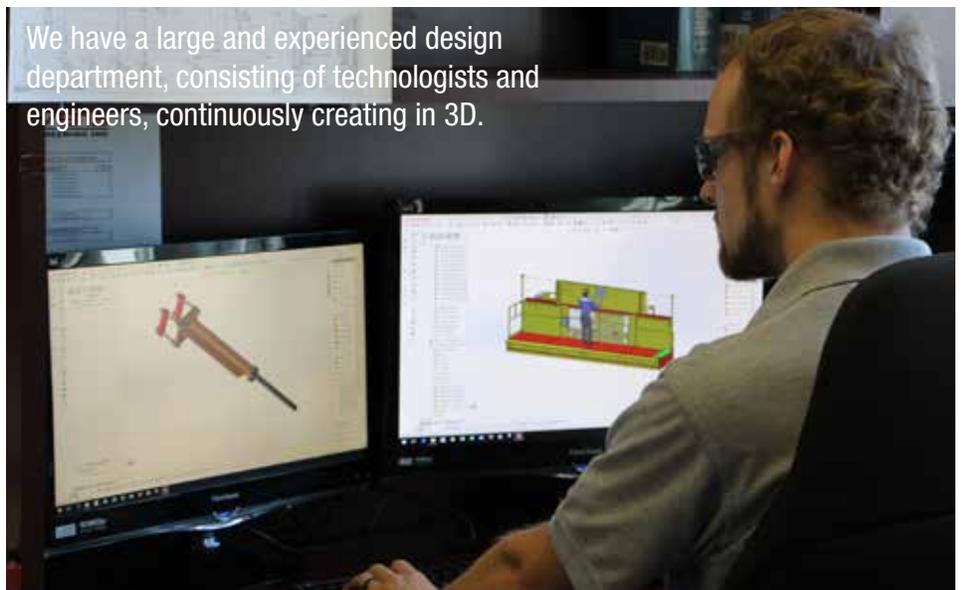


Conveyor cart with several lanes of "pucks" for small part conveyance. Upper structure can "float" relative to chassis for alignment

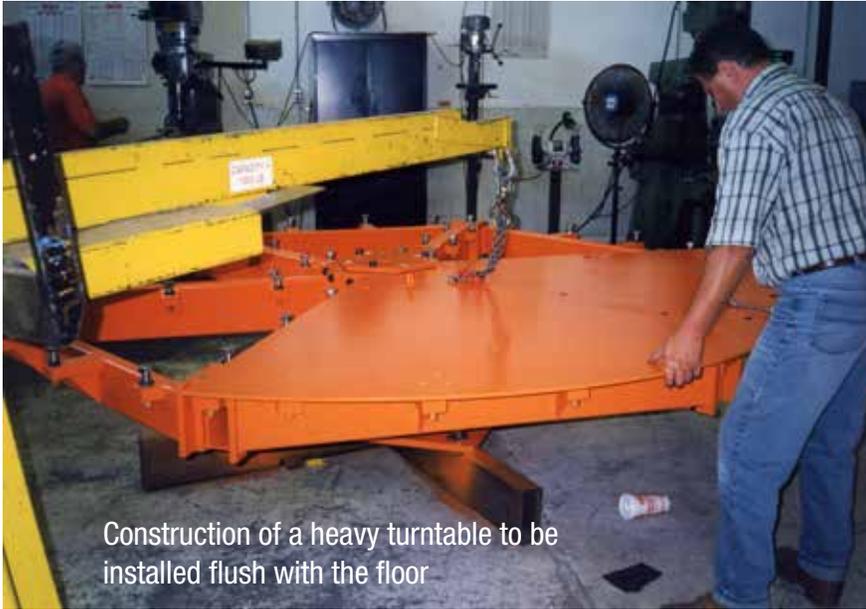
Exit-end gates detail



We have a large and experienced design department, consisting of technologists and engineers, continuously creating in 3D.



Fixtures and Specialty Equipment



Construction of a heavy turntable to be installed flush with the floor



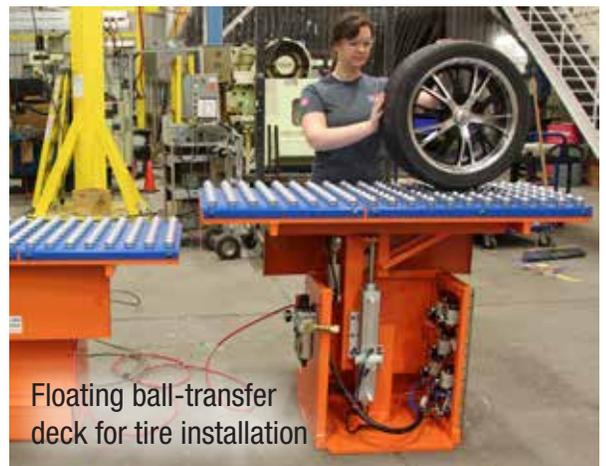
Truck-axle fixtures to position for assembly



We mass-produce! These are conveyor hangers and rotators produced in large quantities on in-house CNC machining centers. Original prototypes were thoroughly designed and engineered.



Slide seats (or Raku seats) for use in auto assembly. The worker can maintain a squatting position for long periods while traveling along with the assembly line.



Floating ball-transfer deck for tire installation

Work Platforms-Lift Platforms

PLC-controlled electric lift platform for auto workers



High-speed electric lift platform: extremely rigid upper deck with no flex and no sway (plywood deck removed for clarity)



Hydraulic scissor lift for extracting car bodies from the assembly line for testing



Hydraulic tandem lift platforms for auto assembly line workers



Work platform serving Givens Engineering manipulator





Machinery and Automation



Givens Engineering, established in 1993, provides manipulators, cranes and custom machinery to a wide range of customers in the United States, Canada and beyond.

Almost everything we manufacture is customized and engineered to some extent.

We employ engineers (mechanical and electrical), designers, machinists, millwrights, welders, electricians and controls specialists to manufacture cranes, manipulators, grippers and end effectors entirely in-house.

Installation, startup support, maintenance and annual inspections are services that we routinely provide.

We have supplied equipment to these large organizations:

Toyota, Honda, GM, Chrysler, Magna, International Truck, Hino Truck, GE, Volvo, NASA, TRW, Dana, GKN, Siemens, Kaiser and many others.



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