



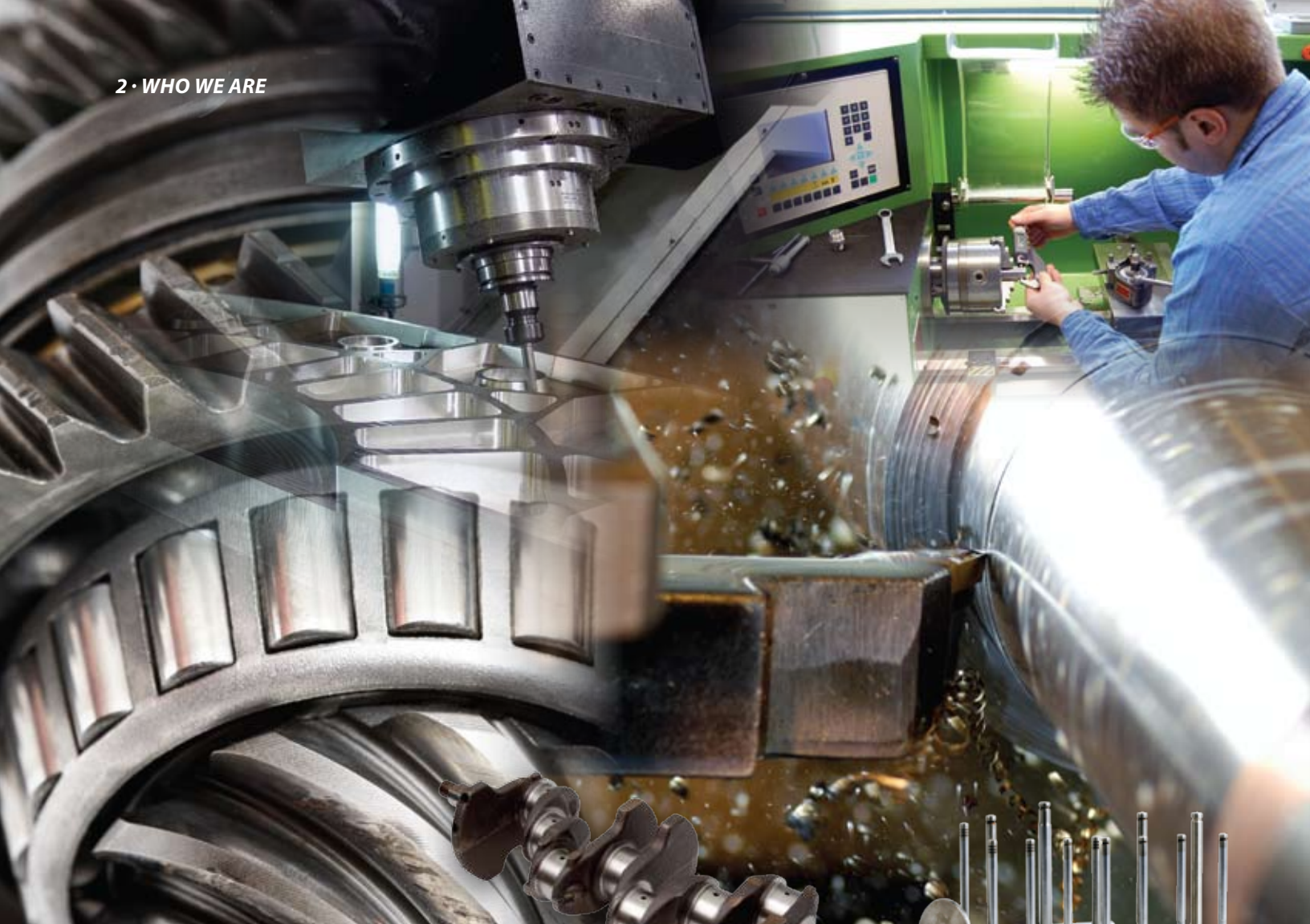
**MACHINE REBUILD & RETROFIT >**

**ROBOTICS & AUTOMATION >**

**CUSTOM DESIGNED MACHINES >**

**CUSTOM MANUFACTURING >**





## WHO WE ARE

Established in 1984, Inter-Motion is a full service professional machinery rebuilder and retrofitter that offers a wide range of additional services, including robotics, automation, custom machine design and custom manufacturing. Based in Kearney, Nebraska, our roots run deep into the Midwest work ethic that puts value and workmanship above all else.

Situated virtually in the middle of the U. S. and just minutes from Interstate 80, Inter-Motion is also centrally located, which allows us to easily service customers from coast to coast and worldwide.

Most importantly, our staff thoroughly understands your need for quality, reliability and service. Company founders Jim Zecha and Ronny Roberts have spent more than 75 years combined in the machine rebuilding business, having started with companies like your own. Since founding the company, they've sought out some of the most talented machinists, technicians and electricians in the business to build Inter-Motion into the company it is today.

Even though we've rebuilt nearly 1,000 machines in the past 25 years, our greatest source of pride is the fact that our customers continually supply us with repeat business and trust us to take their old machines to the next level.

As you flip through the following pages and discover our vast capabilities, we hope you'll give us a chance on your next project. We're betting that our attention to detail and personal service will make you a repeat customer, too.



## MACHINE TOOL REBUILDING

From teardown to final testing, Inter-Motion can professionally rebuild and retrofit any manufacturing machine in your inventory, no matter its age. Not only can we rebuild it to like-new condition, but we will bring it up to OEM standards of performance, as well as current OSHA standards for safety. At the same time, we can retrofit your old manually or hydraulically operated machine with electronic controls and automated processes that lower costs and boost productivity. It can be tough to justify a new machine in any environment; but it's even harder in a tight economy ... even though it may be desperately needed to improve efficiency. Instead, why not let Inter-Motion rebuild your old unit to perform just as well at a fraction of the cost? If you don't already have the machine you need, we can even help you locate an appropriate model and handle all pick-ups and deliveries. Each step in our machine rebuilding process is a critical part of providing you with a manufacturing unit that will give years of trouble-free service, and help you remain competitive in a tough, global marketplace.



After complete tear down, inspection and evaluation, we grind, scrape and fit all ways.



Machines are completely cleaned and repainted down to the smallest detail.



We completely rebuild or install new spindles and make sure that all motors are either rebuilt or replaced. All electric, pneumatic, hydraulic and lubrication systems are replaced with new components.



All components are reassembled, mounted and aligned. Machine runoff and quality checks are performed prior to shipment of any completed machine. All rebuilds are performed with safety at the forefront of every project.

## MACHINE REBUILDING

To the inexperienced, the teardown and inspection process may seem rather simple. After all, it would seem that anyone can take a machine apart. However, this is one of the most important steps in the rebuild process. To prevent serious problems during reassembly and operation, our technicians carefully remove all electric, pneumatic, hydraulic and lubrication systems, along with all major components and break them down to their individual pieces. All machine ways are machined, ground or hand scraped to precision alignment. Each and every piece is then cleaned prior to inspection to determine the amount of wear or damage. Naturally, all worn components are either repaired or replaced. In the process of rebuilding a machine, we also evaluate the spindle condition; replace all bearings; inspect and grind bearing journals as required; grind, scrape and fit all parts to the point that they're as good as new, and rebuild or replace all hydraulic and electric motors. Only then do we begin the process of mounting and aligning the machine's components. In the final steps, the machine is started and components are tested for placement and performance.

### LANDIS 4R OD GRINDER – BEFORE



Inter-Motion has the equipment and expertise to design, install and wire new electrical and pneumatic systems in-house.



Part recipes for quick recall and easy changeover



Custom designed machine enclosures with safety features that exceed OSHA requirements



LANDIS 4R OD GRINDER – AFTER





### **TWENTY-FIRST CENTURY TECHNOLOGY**

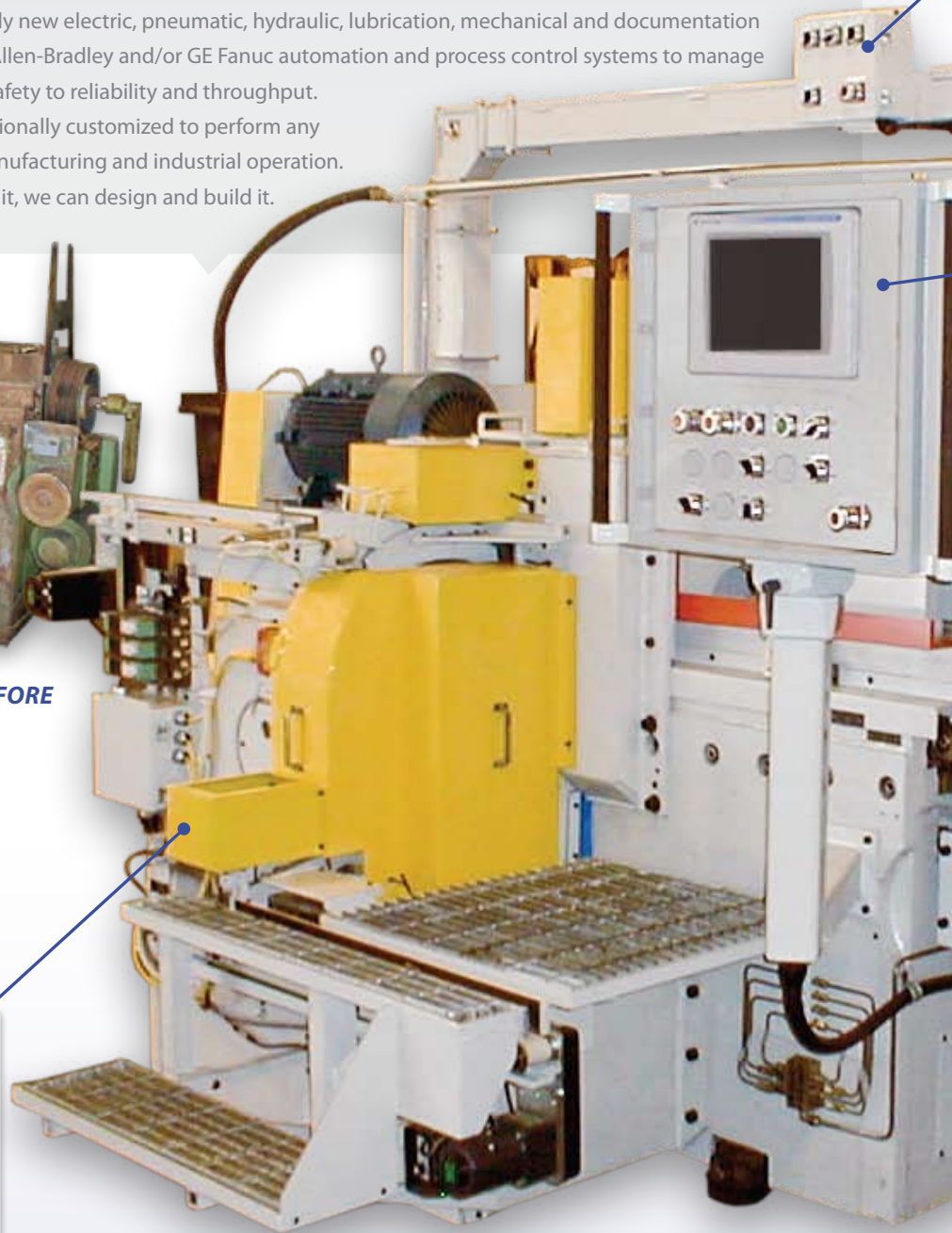
Although nearly any old machine — no matter what its condition — can be rebuilt and brought back to working condition, rebuilding is only worthwhile if that machine can be made to perform up to the standards of new industrial machinery. That's where the engineers in our New Designs and Technology Department come into play. Prior to the rebuilding stage, they decide what modifications will be necessary to bring an outdated machine up to today's technological standards of precision and efficiency — designing and building entirely new electric, pneumatic, hydraulic, lubrication, mechanical and documentation systems. At the same time, we install new Allen-Bradley and/or GE Fanuc automation and process control systems to manage everything from machine protection and safety to reliability and throughput. Of course, all of these systems can be additionally customized to perform any extra functions you might need in your manufacturing and industrial operation. Whatever the case might be — if you need it, we can design and build it.



**GARDNER DOUBLE DISC GRINDER – BEFORE**



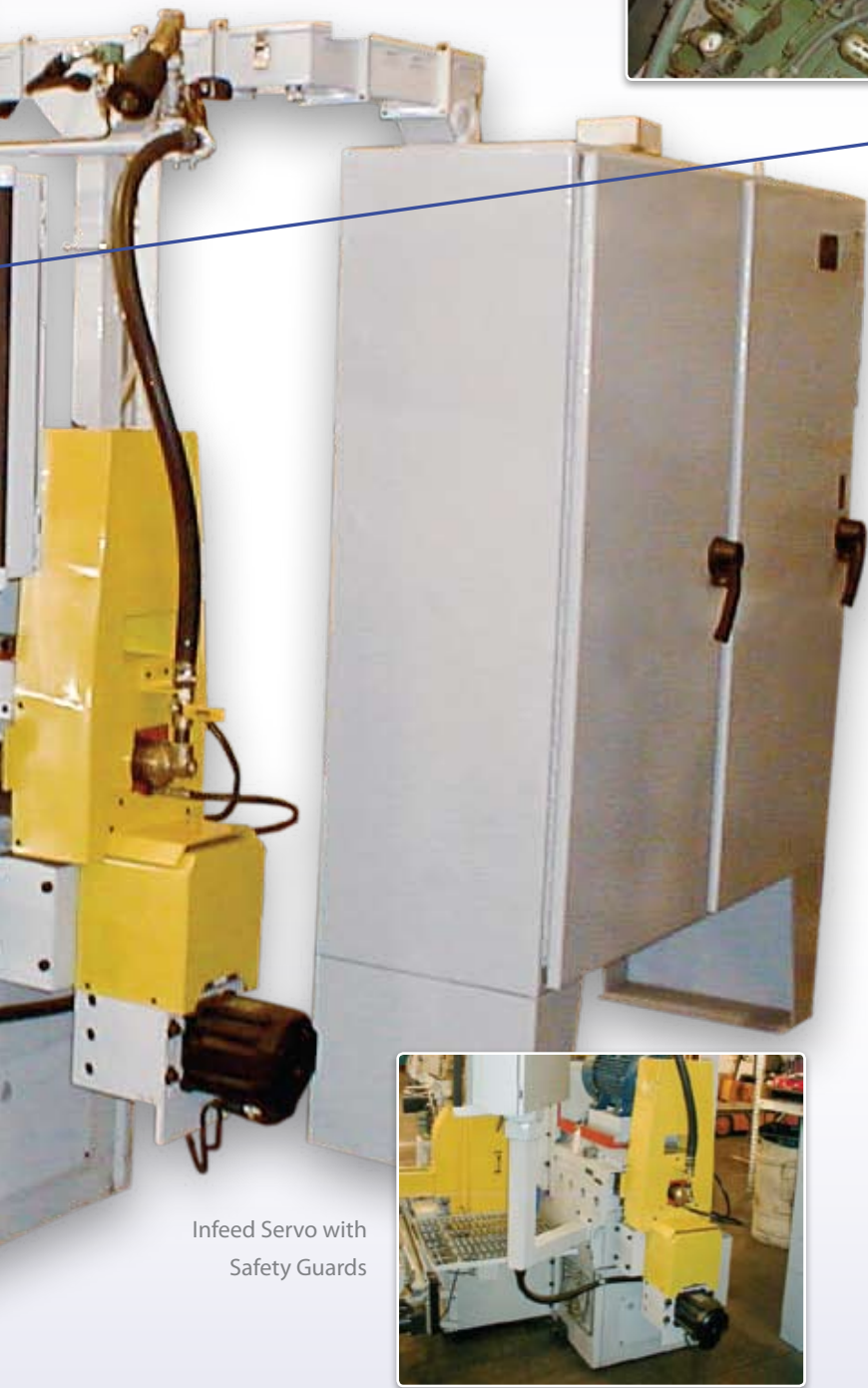
Redesigned and built rotary disc part carrier



**GARDNER DOUBLE DISC GRINDER – AFTER**



Today's controls are designed with the operator in mind.



In process Hi-Resolution Laser  
Measuring Control in pressurized  
enclosure

Infeed Servo with  
Safety Guards





### ADD THE EFFICIENCY OF ROBOTICS

As a certified Fanuc Robotics system integrator, you can be assured that Inter-Motion has all the experience and expertise you need for your robotic integration needs. Whether we install a robot as part of a machine rebuild and retrofit, or we install and program a robot for a separate job altogether, Inter-Motion can help your company reduce costs, improve quality and maximize productivity. As America's leader in robotic automation, Fanuc already has more than 200 robot variations at work in a wide range of applications, including assembly, material removal, material handling (machine tending, picking, packing and palletizing), painting, dispensing and welding. In the meantime,

Inter-Motion has designed and built a wide range of end-of-arm tooling (EOAT) components to handle our customers' products and components.



Inter-Motion can design, install and wire all components, including automation and process control systems.



EOAT designed and built for multiple component picking from OD



EOAT designed and built for multiple component picking from ID



Part picking and placing from removable tray system









**CUSTOM-DESIGNED INDUCTION HARDENING MACHINE**



Magnetothermic Induction Hardening Coil



Electronics designed for every application with the appropriate lockout-tagout procedures

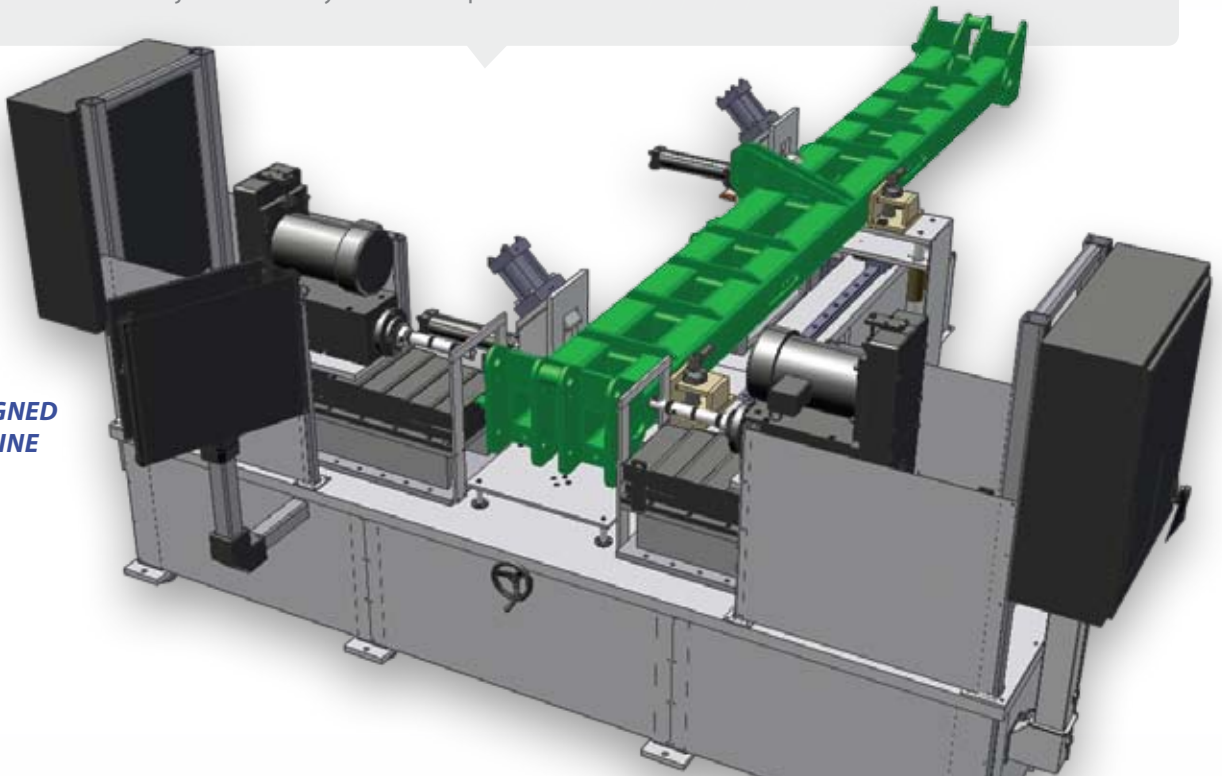


Water Recirculation system with high frequency power supply, coil & bus



**IF YOU CAN DREAM IT, WE CAN BUILD IT**

In addition to our rebuilding and retrofitting capabilities, Inter-Motion also produces custom machines engineered and designed to fit your unique production needs. Thanks to our extensive inventory of work tools, our custom machinery is not limited to any particular industry, either. Whether we build a machine from off-the-shelf components or design and build it from the ground up, our goal is to lower your cost of production and help you stay ahead of the efficiency curve. Some of the more complex units we've built over the years include induction hardening machines, custom grinding machines and specialized boring units. However, our capabilities are virtually endless. Fact is, we challenge you to bring us a product or component that you want built, handled, processed or packaged. We'll venture to say we can take the job all the way from concept to runoff.

**CUSTOM DESIGNED  
BORING MACHINE**

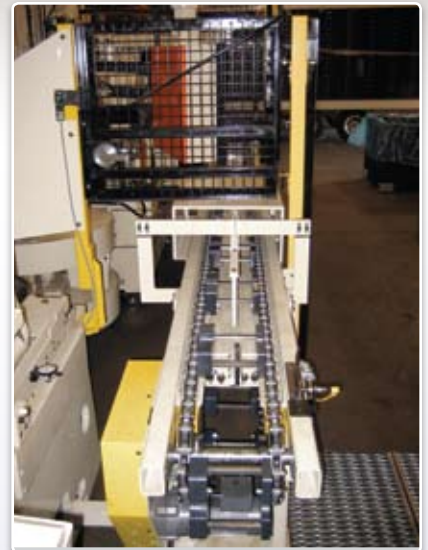
Pin Journal Drilling Machine



Multi Station Drilling Machine



Automatic Piston Ring Grinder



Multi Station loading system with entrance and exit conveyers, fixturing and part paddle stations

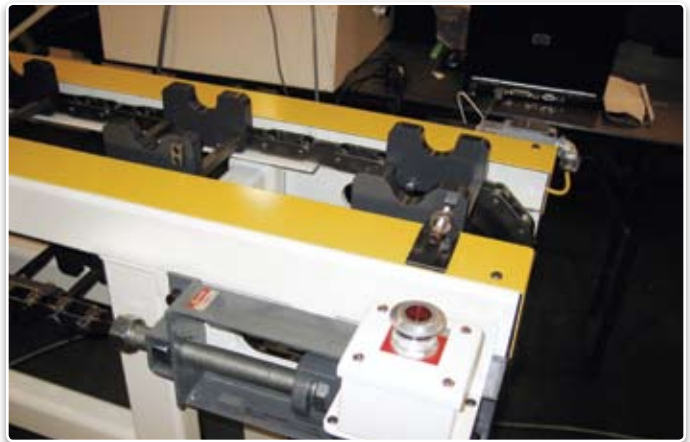


**EXPERTLY DESIGNED SUPPORT SYSTEMS**

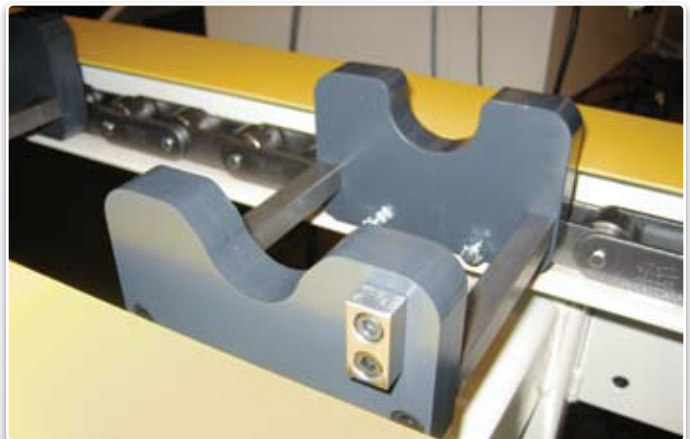
Inter-Motion's custom design capabilities certainly aren't limited to machine building and retrofits. Whether your needs call for a turnkey machine, safety enclosure, electrical control system, conveyor mechanism or process control system, our design and service teams are ready to help. Examples of work we've already done for our clients include combining robotics with current or rebuilt machines as part of a retrofit; adding or incorporating chain- or screw-feed conveyor systems; adding extra safety devices and installing safety cages and guarding that goes above and beyond current OSHA standards. Whatever the project, our goal is to lower your cost of ownership by minimizing training, downtime, operator involvement and revalidation.



Safety guarding for any size project



E- Stop designed into conveying system



Fixtures and Part Paddles

**LEAN-BASED CUSTOM MANUFACTURING**

When you've spent nearly a quarter century helping manufacturers improve quality and efficiency, you can't help but learn a few things along the way. Today, we offer those talents to a growing number of clients in the form of custom design, manufacturing and assembly. Whether it involves a bulk order for a basic part, a structural frame that we've helped analyze for stress points, or a complex electro-mechanical assembly, we offer a full range of services and capabilities. Our services include, but aren't limited to CAD/CAM design, multi-faceted machining, robotic welding, MIG welding, sheet metal fabrication, finishing and painting. Most importantly, our employees take pride in their work, knowing that, even though our name will never appear on the finished product, every part that leaves our plant was built to quality standards and that the warranty you provide your customer depends on that fact.



Rear Fold Row Markers



Grain Bin Support Legs



Grain Bin Ring Beams



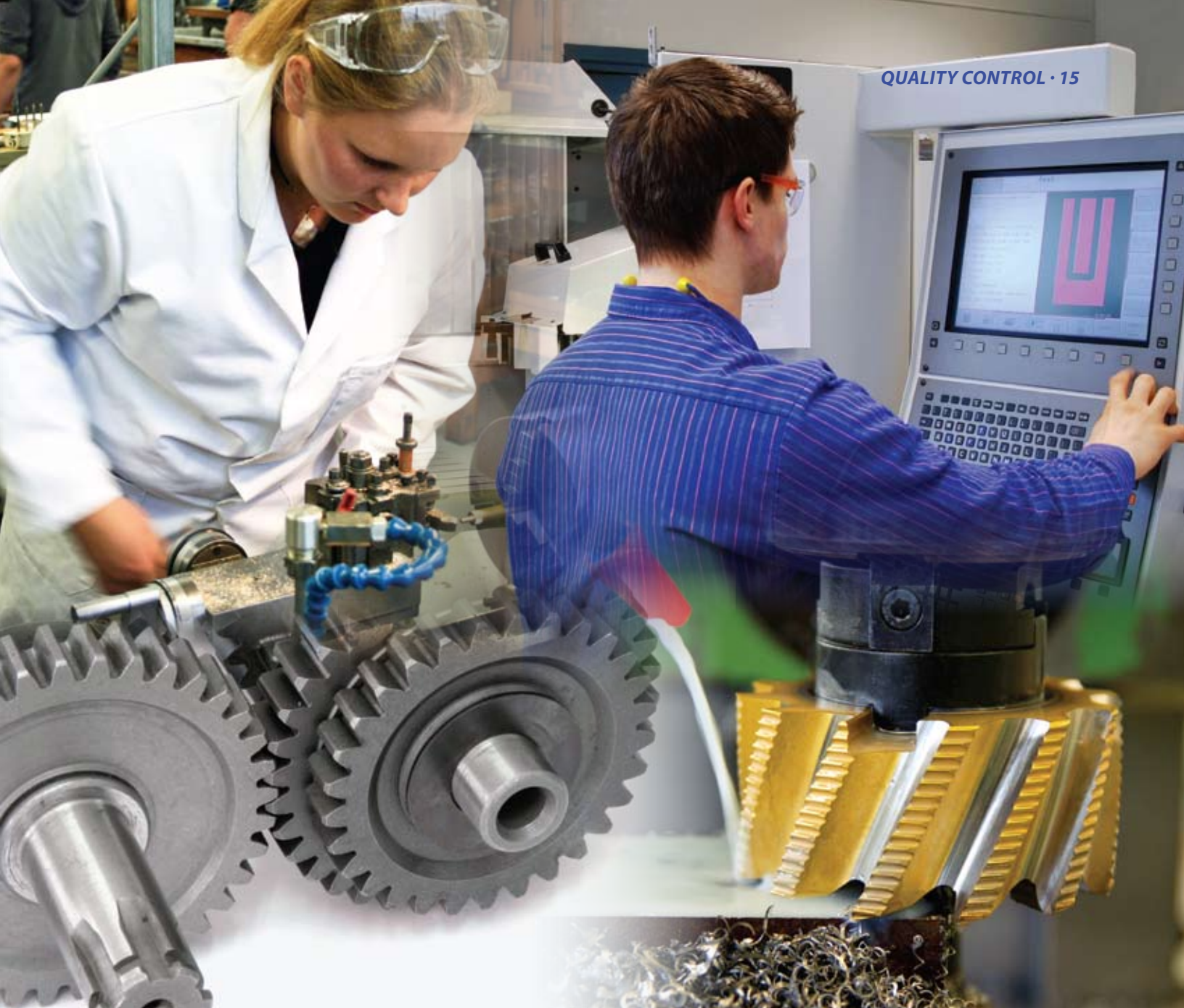
Roll Cages

General welding  
for any job



Tow Hitch





## ► INTEGRATED QUALITY CONTROL

At Inter-Motion, we take a two-fold approach to quality control that's based on a perfectionist philosophy. First, we realize that quality can't be inspected into a product. It has to be part of a strong work ethic that ensures that quality goes into every step of design and construction of the machine itself. In the meantime, we rely on complete in-house statistics to keep track of each rebuilding component and state-of-the-art laser technology is used to align all machines. We also perform thorough checks on all parts — whether they've been purchased from a vendor or custom made at our facility.

Once we're certain the machine's construction is sound, we perform rigorous tests by doing complete S.P.C. run-offs. These tests are carefully documented, then assembled into a report for your approval. Finally, our technicians accompany the machine to your facility, where they perform a second run-off to verify performance.



State-of-the-art Renishaw laser performance measurement and calibration systems



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