



MECHATRONIC SOLUTIONS

Robotics Products & Solutions





Aluminum Extrusion

Automation Control

Connectivity & Networking

Conveyors

Custom & Standard Enclosures

Linear Motion

Machine Bases

Machine Safeguard

Machine Vision

Motion Controllers & Drives

Part Feeders

Pneumatics

Precision Stages

Robotic End Effectors

Robotics

Rotary Motion & Gearboxes

Sensors

Workstations & Assembly Tables

Automation Technology Delivered

Mechatronic Solutions is a leader in providing high-quality automation technology products, solutions, and services to companies across nearly all industries in Minnesota, Wisconsin, North Dakota, and South Dakota.

At Mechatronic Solutions, we are experts in automation technology. Over 50% of our employees are engineers and automation specialists. We have an extensive Automation Solutions Lab with a variety of hardware, including robots, part feeders, vision, PLCs, and more for proof-of-concept testing. We also offer frequent education and training sessions on all automation technologies for our customers.

With a highly trained and skilled team, customer-centric approach, and partner network that features some of the top automation manufacturers in the world, including Dorner, Festo, Omron, Yaskawa, and many more, we are here to work with you as your partner in automation.

Contact Information

Website: www.mechatronicsolutions.com

Email: info@mechatronicsolutions.com

Phone: (763) 447-3407

Automation Technology Delivered

Mechatronic Solutions is a distribution partner for the following leading manufacturers:



SCARA Robots



Omron i4L Series

Payload: 5kg
Reach: 350-550mm
Repeatability: ± 0.01 mm
Ideal Applications:
 Assembly, Material Handling,
 Pick & Place/Pack



Omron Adept Cobra Series

Payload: 5kg
Reach: 450-650mm
Repeatability: ± 0.01 -0.02mm
Ideal Applications:
 Assembly, Material Handling,
 Pick & Place/Pack



Omron Adept eCobra Series

Payload: 5.5kg
Reach: 600-800mm
Repeatability: ± 0.003 -0.017mm
Ideal Applications:
 Assembly, Material Handling,
 Pick & Place/Pack



Yaskawa SG Series

Payload: 3-6kg
Reach: 400-650mm
Repeatability: ± 0.01 mm
Ideal Applications:
 Assembly, Material Handling,
 Pick & Place/Pack, Sorting

Parallel Robots



Yaskawa MPP Series

Payload: 3kg
Repeatability: ± 0.1 mm
Number of Axes: 4
Ideal Applications:
 Assembly, Picking & Packing,
 Part Transfer



Omron Sysmac Delta Series

Payload: 1-8kg
Repeatability: ± 0.3 -0.4mm
Number of Axes: 2-5
Ideal Applications:
 Assembly, Picking & Packing,
 Part Transfer



Omron Adept Quattro Series

Payload: 6-10kg
Repeatability: ± 0.1 mm
Number of Axes: 4
Ideal Applications:
 Assembly, Picking & Packing,
 Part Transfer, Food Processing



Omron Adept Hornet Series

Payload: 3-8kg
Repeatability: ± 0.1 mm
Number of Axes: 3-4
Ideal Applications:
 Assembly, Picking & Packing,
 Part Transfer, Washdown

Collaborative Robots



Omron TM Series

Payload: 4-14kg
Reach: 700-1300mm
Repeatability: $\pm 0.05-0.1$ mm
Ideal Applications:
Assembly, Machine Tending,
Material Handling, Palletizing,
Pick & Place/Pack



Yaskawa HC Series

Payload: 10-20kg
Reach: 1200-1700mm
Repeatability: $\pm 0.05-0.1$ mm
Ideal Applications:
Assembly, Machine Tending,
Material Handling, Palletizing,
Pick & Place/Pack, Weldi

Miniature 6-Axis Robots



Mecademic Meca500

Payload: 0.5kg
Reach: 260mm
Repeatability: ± 0.005 mm
Ideal Applications:
Assembly, Dispensing,
Inspection, Machine Tending,
Pick & Place, Testing



Yaskawa Motomini

Payload: 0.5kg
Reach: 350mm
Repeatability: ± 0.02 mm
Ideal Applications:
Assembly, Dispensing,
Machine Tending, Material
Handling, Packaging, Sorting

Mobile Robots



Omron LD Series

Payload: 60-250kg
Max Speed: 0.9-1.8m/s
Ideal Environments:
Manufacturing Floors,
Warehouses, Clean Tech,
Laboratories



Omron HD-1500

Payload: 1500kg
Max Speed: 1.8m/s
Ideal Environments:
Manufacturing Floors,
Warehouses, Clean Tech,
Laboratories

Multi-Axis Robots



Yaskawa GP Series

Payload: 4-14kg
Reach: 700-1300mm
Repeatability: $\pm 0.05-0.1$ mm
Ideal Applications:
 Assembly, Dispensing, Machine Tending, Material Handling, Pick & Place/Pack



Yaskawa MH Series

Payload: 2-900kg
Reach: 532-4683mm
Repeatability: $\pm 0.03-0.5$ mm
Ideal Applications:
 Assembly, Dispensing, Machine Tending, Material Handling, Pick & Place/Pack



Omron Viper Series

Payload: 5kg
Reach: 653-855mm
Repeatability: ± 0.02 mm
Ideal Applications:
 Assembly, Material Handling, Machine Tending, Packaging



Yaskawa PH Series

Payload: 130-200kg
Reach: 3474-3505mm
Repeatability: $\pm 0.3-0.5$ mm
Ideal Applications:
 Material Handling, Press Brake, Machine Tending



Yaskawa UP Series

Payload: 400kg
Reach: 3518mm
Repeatability: ± 0.5 mm
Ideal Applications:
 Material Handling, Part Transfer



Yaskawa MPK/MPL Series

Payload: 2-800kg
Reach: 900-3159mm
Repeatability: $\pm 0.07-0.5$ mm
Ideal Applications:
 Palletizing, Pick & Place/Pack



Yaskawa HP Series

Payload: 20kg
Reach: 1717mm
Repeatability: ± 0.06 mm
Ideal Applications:
 Material Removal, Dispensing



Yaskawa PL Series

Payload: 500kg
Reach: 3159mm
Repeatability: ± 0.5 mm
Ideal Applications:
 Palletizing

Multi-Axis Robots



Yaskawa EP/EPH Series

Payload: 130-200kg
Reach: 3474-3505mm
Repeatability: $\pm 0.2-0.5$ mm
Ideal Applications:
Press Brake



Yaskawa MPX Series

Payload: 5-15kg
Reach: 727-2700mm
Repeatability: $\pm 0.02-0.2$ mm
Ideal Applications:
Painting



Yaskawa EPX Series

Payload: 5-20kg
Reach: 1256-2729mm
Repeatability: $\pm 0.15-0.5$ mm
Ideal Applications:
Painting



Yaskawa ES Series

Payload: 165-200kg
Reach: 3140mm
Repeatability: ± 0.2 mm
Ideal Applications:
Spot Welding, Material Handling



Yaskawa AR Series

Payload: 7-25kg
Reach: 727-3124mm
Repeatability: $\pm 0.02-0.15$ mm
Ideal Applications:
Arc Welding



Yaskawa MA Series

Payload: 6kg
Reach: 3121mm
Repeatability: ± 0.15 mm
Ideal Applications:
Arc Welding



Yaskawa MC Series

Payload: 50kg
Reach: 2038mm
Repeatability: ± 0.07 mm
Ideal Applications:
Laser Welding, Cutting



Yaskawa MS/SP Series

Payload: 80-235kg
Reach: 2236-3140mm
Repeatability: $\pm 0.07-0.2$ mm
Ideal Applications:
Spot Welding

Robotic Welding Systems

ArcWorld robotic welding systems from Yaskawa Motoman are turnkey solutions for arc welding. They are pre-engineered, pre-assembled, and shipped out ready for use. ArcWorld systems are compatible with leading welding equipment manufacturers, including Miller, Lincoln Electric, Fronius, and SKS. The ArcWorld lineup includes:

- ArcWorld 50: Compact, for small-to-medium parts
- ArcWorld 1000: Compact, for general fabricators
- ArcWorld 200/500: Robust, wire-to-weld solutions
- ArcWorld 2000: Heavy-duty, for large parts
- ArcWorld 6000: For large quantity production runs



Feeding Systems

Part feeders and flexible feeding systems are a significant aspect of many robotic systems and automated manufacturing processes.

Our selection of feeders includes Asyri's award-winning 3-axis vibration Asycube series, Asyri's Asyfeed Pocket Module, and Omron's mechanical AnyFeeder.

- Asycube 530: For parts 30-150mm
- Asycube 380: For parts 15-60mm
- Asycube 240: For parts 5-40mm
- Asycube 80: For parts 3-15mm
- Asycube 50: For parts <0.1-5mm
- Omron AnyFeeder: For parts <30-100mm
- Asyfeed Pocket Module: Robot, feeder & vision



Robotic End Effectors

To get the most out of your robots, you need the proper end effector or end-of-arm tooling. Mechatronic Solutions can design a custom end effector specific to your robot and application. We also offer a large variety of end effectors from these leading manufacturers:

- SCHUNK
- Robotiq
- Schmalz
- Zimmer
- Festo/Fabco-Air

For any task, we have a solution to get the job done. Our selection of end effectors includes:

- 2-Jaw (Angular & Parallel)
- 3-Jaw
- Magnetic
- Needle
- Swivel
- Vacuum



Robotic Safety

It is imperative to properly safeguard your robotic systems to ensure the safety of your employees as well as abide by laws and regulations, such as those set forth by OSHA.

We offer the full line of Omron safety products, the largest in the industry, which includes area scanners, light curtains, safety mats, and more. We also offer hard guarding/fencing from GSM and can customize it to your specification.



Programming Software



Yaskawa MLX300

Yaskawa's PLC integration solutions provide an interface that enables the programming and control of Yaskawa Motoman industrial robots with the widely accepted Rockwell Automation Programmable Logic Controllers (PLCs). This software provides a well-integrated environment that leverages the knowledge and experience of the PLC programmer, while providing access to industry-leading robot technology.



Yaskawa MotionWorks IEC

Through the use of Yaskawa's IEC61131-3 programming environment, MotionWorks IEC Express and MotionWorks IEC Pro enable programmers to take advantage of several standard programming languages within a single development package.



Omron Sysmac Studio

Omron's Sysmac Studio is a truly integrated development environment for machine automation, combining configuration, programming, simulation, and monitoring in a simple interface. This unique environment integrates logic, motion and drives, robotics, safety, visualization, sensing and information technologies in a single project, thus reducing the learning curve and the intra-operative software costs.



Omron ePLC Connect

The ePLC Connect Server software provides seamless connectivity with an Ethernet/IP PLC, including Allen Bradley's SLC, MicroLogix, and ControlLogix product lines. All application programs and locations are defined and reside within the user's PLC. The PLC client retrieves this data and commands the robot to move.



Omron Automation Control Environment (ACE)

ACE is Omron's premier PC-based software package for production automation. It helps you quickly and easily set up your robot systems. It now offers a new user-friendly interface and includes new capabilities to make it even simpler to design and deploy the most efficient production lines. This platform can be used to manage Omron's entire portfolio of industrial robots, controls, vision and flexible feeding systems.

Proof of Concept/Feasibility Testing



Proof of concept or feasibility testing is an important part of Mechatronic's approach to providing high quality solutions and exceptional results for our customer's automation projects. For many engineers, the decision to invest in various forms of automation technology, especially robotic systems, can be daunting. We offer testing to aid in this process and help you answer these questions prior to making the investment:

- Will my automation idea work?
- Can the automation project achieve success?
- Will there be an acceptable return on investment for my company?
- How will this affect the quality and throughput of my process?

Mechatronic Solutions has an experienced team of Application Engineers and an extensive Automation Solutions Lab with extensive demo equipment to conduct testing. Our on-site demo equipment includes collaborative, miniature 6-axis, multi-axis, parallel, and SCARA robots, flexible part feeders, a variety of end effectors, vision systems, and more.

Common types of robotic proof of concept/feasibility testing include:

- Robotic Cycle Rate/Time
- Conveyor Tracking
- Robot & Flexible Part Feeding System Integration
- Machine Vision & Inspection
- Vacuum Gripper with Robotics
- Robotic End of Arm Tooling



MECHATRONIC

SOLUTIONS

CONTACT US

10900 73rd Avenue N, Suite 132
Maple Grove, MN 55369

Phone: (763) 447-3407
www.mechatronicsolutions.com

Connect with us

