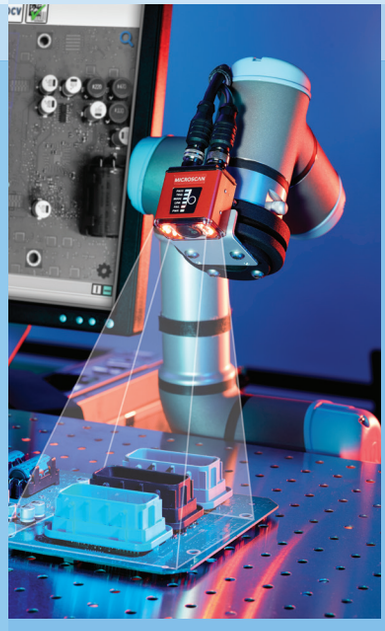
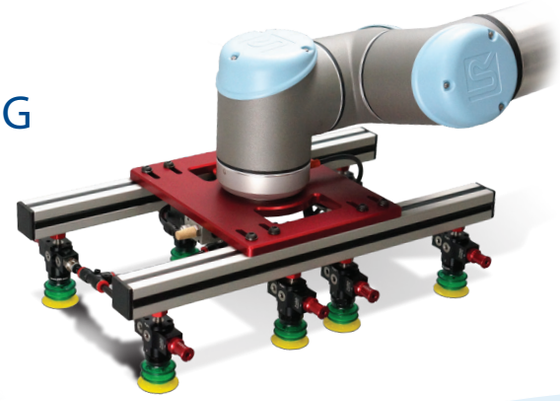


Robotic Solutions

MOTION Ai
Automation Intelligence™

GRIPPERS
AND TOOLING



IN A WORLD OF ROBOTIC SOLUTIONS…

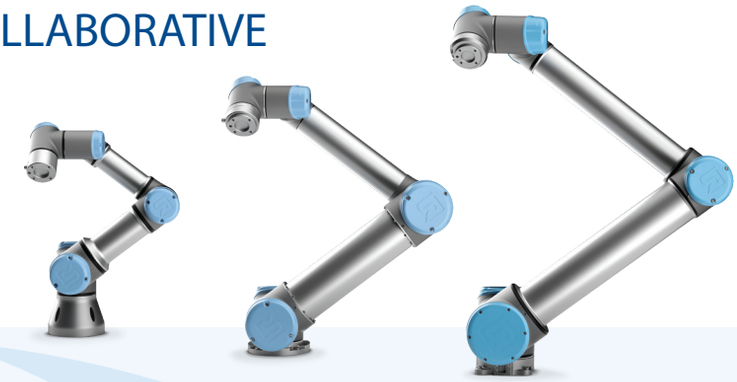
MOTION AI HAS IT COVERED.

With over 25 years of experience in automation, Motion Ai has formed key partnerships with premier manufacturers to deliver the right tools for the job. We offer several different levels of solutions, from the components you need to do-it-yourself, through a custom designed sub-assembly, all the way up to a total system solution as an extension of your engineering team.

FLEXIBLE
FEEDERS

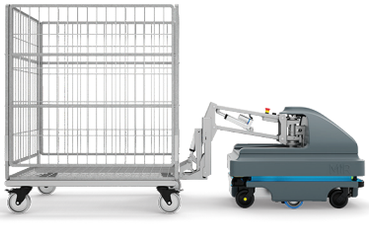
HIGH-SPEED INDUSTRIAL

COLLABORATIVE



VISION & SENSING

SAFETY



MOBILE

MOUNTING

COLLABORATIVE ROBOTS

Safe + Easy to Use = Fast ROI

Works alongside human operators

Safety is embedded in the core design of cobot technology, and it's changing the game of automation. Without the need for fencing, you can rapidly reconfigure work-cells, leverage human input, and get your ROI faster than ever.

Easy and Intuitive programming

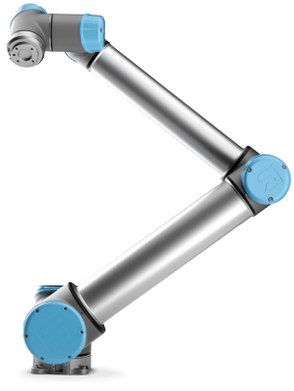
The next generation of robots are being taught new tasks by workers with no programming experience. Tackle the low-volume / high-mix tasks you never dreamed were possible:

- Teach the Robot by hand
- Graphical Programming feels natural and intuitive
- Plug-and-play; get up and running in minutes

A Complete Family of Cobots

UR3
3 kg (6.6 lbs)
500 mm (19.7 in)

UR5
5 kg (11 lbs)
800 mm (33.5 in)



UR10
10 kg (22 lbs)
1300 mm (51.2 in)

INDUSTRIAL ROBOT ARMS

High Speed - High Precision

SCARA - 4 Axis Robots

Selective Compliance Assembly Robot Arms offer a high level of precision due to their limited degrees-of-freedom.

- Ideal for assembly and high-speed pick and place
- Repeatability down to 10 µm in X-Y, 3 µm in Z
- Cycle times as low as 0.30 seconds

5 & 6 Axis Articulated

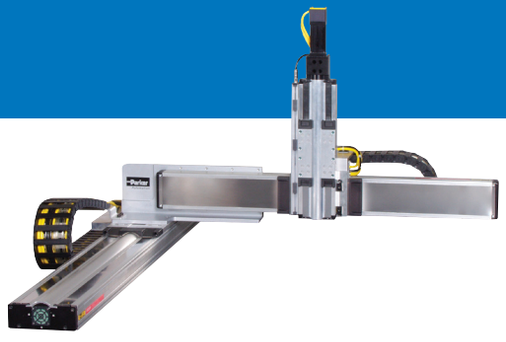
These robotic arms have a high reach range and dexterity, allowing them to perform human tasks.

- Reach range of 430 mm-1300 mm
- Payloads up to 13 kg (26 lbs)

Parallel and Gantry Robots

These overhead robot systems shine in ways that traditional robot arms simply can't.

- Unmatched speed: Parallel robots can run up to 10 m / sec
- Highly customizable: Gantry systems are designed to fit the individual application.
- Payload kings: Gantry robots can handle payloads of 100+ kg



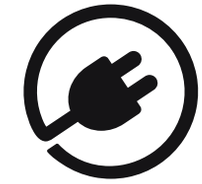
ROBOTIC GRIPPERS

Adaptive Electric

A plug-and-play solution with extreme flexibility

Adjustable

You choose the position, speed and force of the gripper for your part.

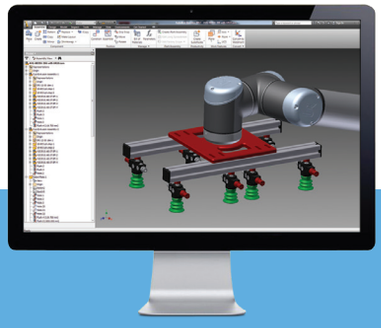


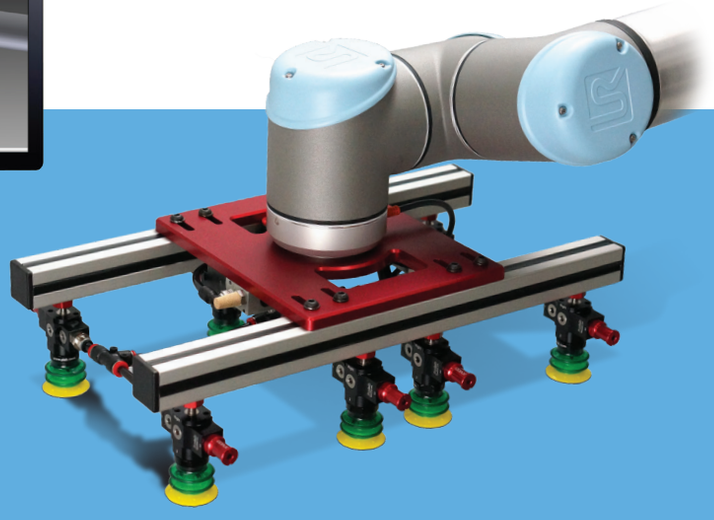
Electric

No need to worry about pneumatic lines, regulators, valves or vacuum.

Plug-and-Play

The most widely used gripper in collaborative applications.





Vacuum

General purpose solution for picking parts quickly that can't be grasped traditionally

Thin parts? Stacked? Sheets of material?

No problem. Vacuum solutions are ideal for parts that are low profile and don't have a clear means for grasping.

Pneumatic and Electric Jaws

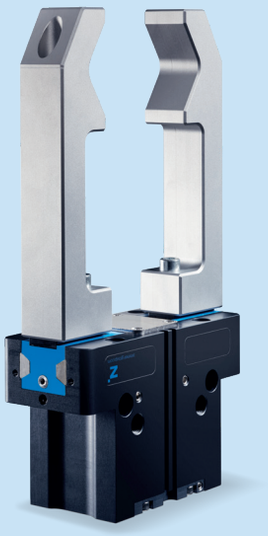
Tried and tested technology used for years with robotic end of arm tooling

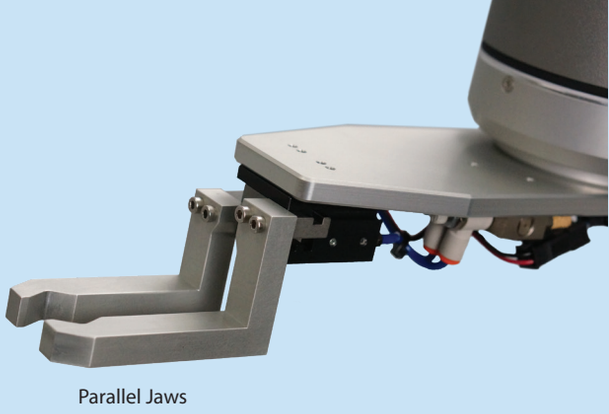
Grasping

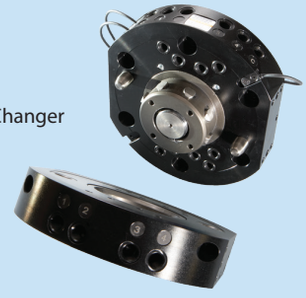
If your part can be held, we have a gripper for the job. Great for picking parts of known size and shape with customized fingertips

Pneumatic

- High force and speed
- Lower complexity for lower cost
- Variety of styles: Parallel, Angular and 3-jaw models

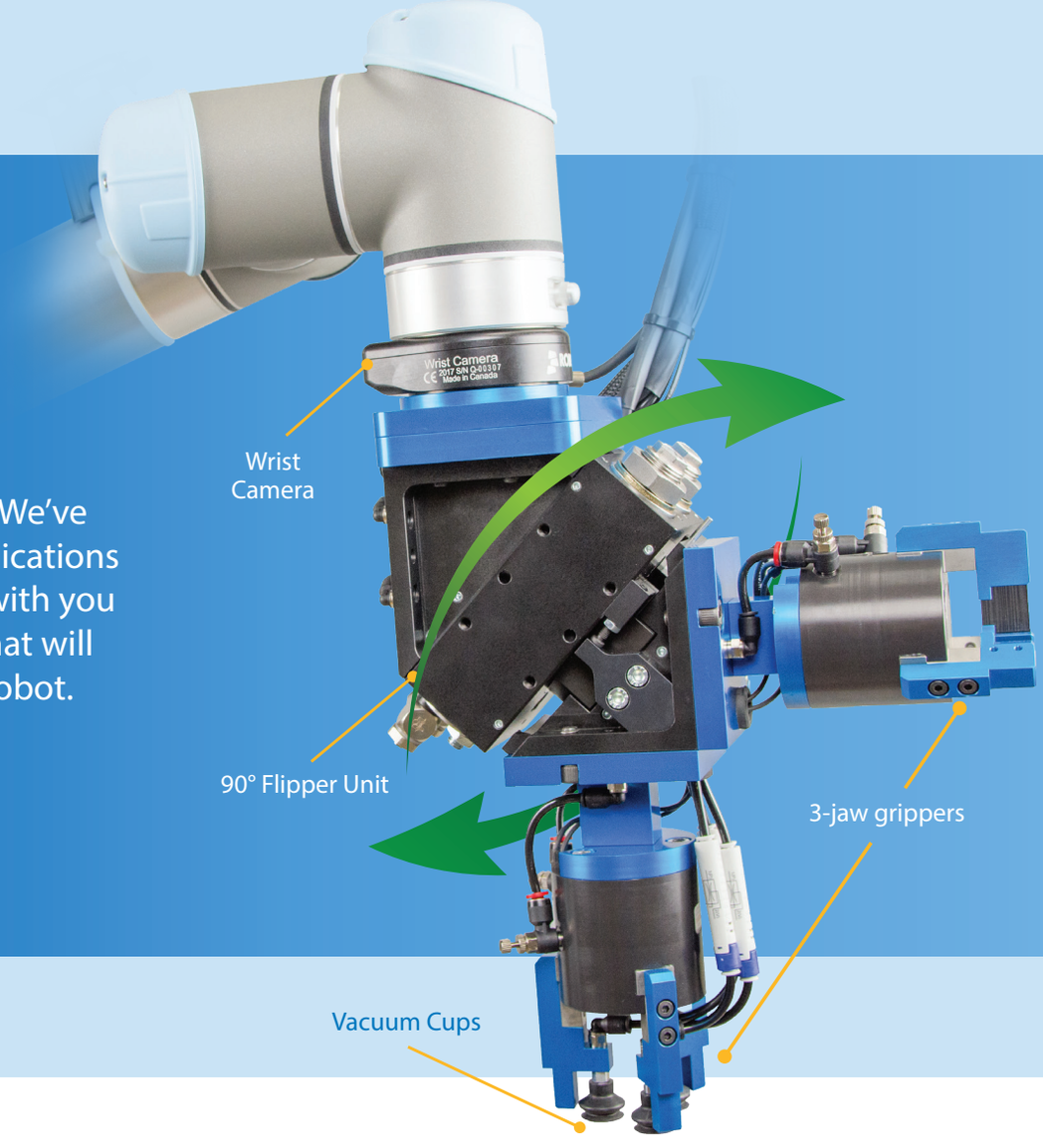






Custom and Specialty

Need something unique? We've got you covered. Our applications solutions team will work with you to design a custom tool that will plug-and-play with your robot.



SENSING

Force/Torque Sensors

- Gives your robot the sense of touch
  - Force Sensing in X,Y,Z
  - Torque Sensing in Mx,My,Mz
- Precise part insertion
- Great for assembly tasks
- Process tasks like sanding and polishing

Robotiq's FT 300 Sensor can be used with their Path Recording command in order to hand-teach the robot a precise movement path for dispensing, gluing and other path-based applications.

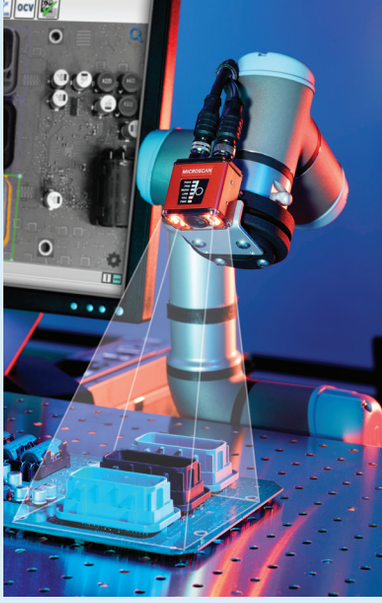
Industrial Sensors

Motion Ai offers a variety of industrial sensors for additional robotic feedback. Sensors can be used to detect part presence/absence, measure distance, detect material and more.

Sensor Types Range from:

- Photoelectric
- Proximity Sensors
- Ultrasonic Sensors
- Fiber Optic
- Laser Measurement
- Mechanical Switches

VISION



Robot-centric vision solutions that can scale from simply finding parts scattered on a table, all the way through barcode reading, part inspection and QC

We help specify the right solution by first performing in-depth vision analysis at our state of the art vision lab in our Danvers, MA facility.

Simple → Powerful

Robotiq Wrist Camera

- Plug-and-Play
- Teach in minutes
- Ideal for picking random parts in 2D
- Programmed directly from UR Controller
- Calibrated with provided grid sheet from Robotiq

Smart Cameras

- A variety of vision tools
  - Barcode (1D/2D)
  - Inspection
  - Count
  - OCR
- Programs processed on-board the camera
- Lensing and lighting can be included into one compact unit

Full-blown Machine Vision

- Full Vision Suite of tools
- Perform tasks like:
  - Inspection
  - Measurement
  - Pattern Match
  - Color Analysis
- Processing done on Vision PC
- Multi-Camera solutions

MOUNTING

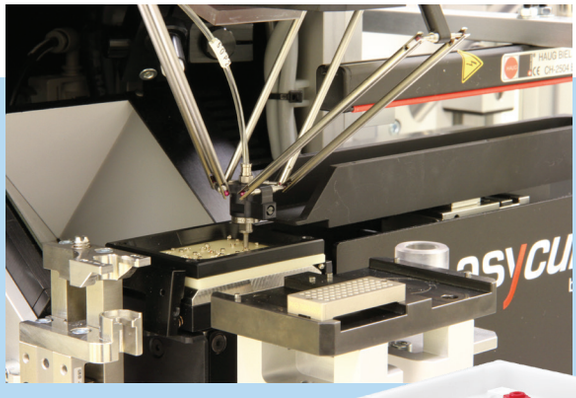
Pedestal Bases

A heavy duty pedestal base ensures the repeatability of your application

- Available in 24" or 36" square footprint
- Caster wheels or leveling feet
- Custom configurations available

Work Tables

FLEXIBLE PART FEEDERS



Today's flexible part feeders are leagues beyond the outdated technology of hard-tooled bowl feeders. Some of the major benefits are the elimination of tooling changeover, and the ability to handle much smaller and more fragile parts with precision

SAFETY

Safety Scanners

- Programmable area coverage up to 15 m
- Slow or Stop robot when operator enters workspace

Light Curtains

- Detection height = sensor height
- Muting and blanking functions available
- Series connection of multiple sets available
- Slow or Stop robot when operator enters workspace

Safety Mats

- Simple Setup with large area coverage
- Tough enough to withstand fork lift traffic
- Single-piece molded construction with customizable trim
- Slow or Stop robot when operator enters workspace

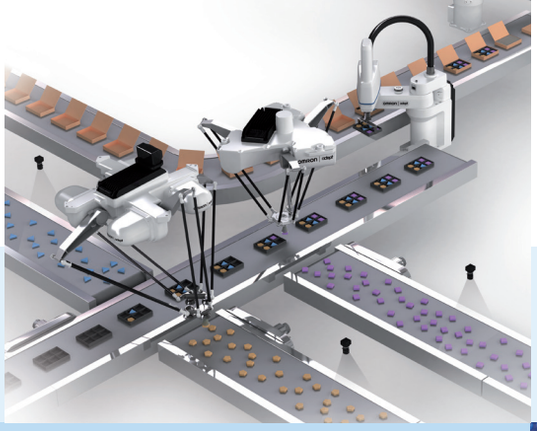
Safety Relays & Controllers

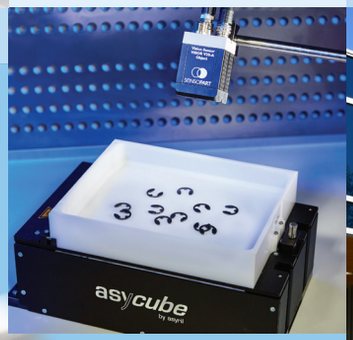
- Centralized or distributed safety network
- Programmable controllers support easy design, verification, standardization and re-usage of the safety program
- Clear diagnosis and monitoring via Ethernet

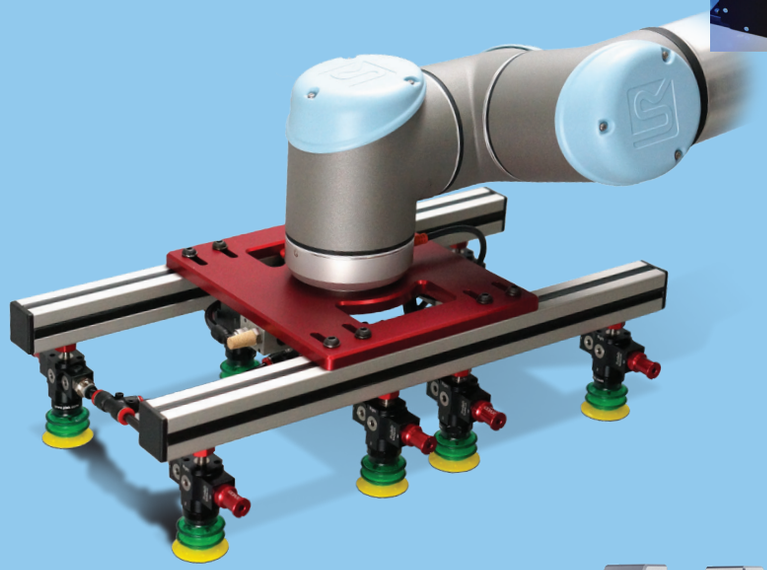
SOFTWARE

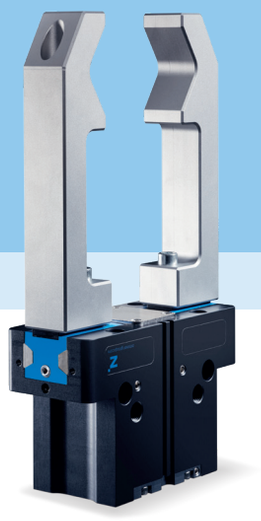
Take your robot application to the next level with advanced features from our stand-alone software suite

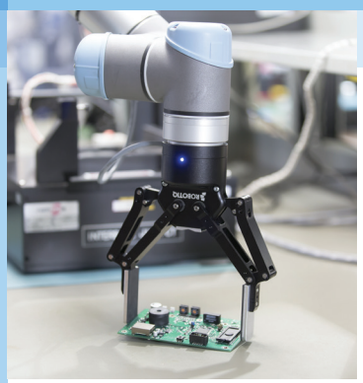
- 3D Visualization and Simulation
- CAD to Path Generation
- Collision Avoidance Motion Planning
- Script File Generation
- Live Robot Control
- Force-based hole detection and insertion
- Alignment and centering using Force Control











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