# UNIVERSAL ROBOTS SOLUTIONS







# Turn Key Solutions Starting at \$90,000

Want to learn more?







Set up your application in 3 easy steps:

- 1. Enter box dimensions & weight
- 2. Enter pallet dimensions
- 3. Set pallet pattern





# **Cobot Palletizing Solutions**

Robotiq's palletizing solutions — AX Series and PE Series — mean you can start production and earn ROI faster because of easy setup and high performance cycle time.

Setup is easy because all the elements included in the box are connected—no need to design or program connection between robot controller and hardware.

Robotiq software generates optimized cobot motions based on pallet layout. It also synchronizes motion control of the cobot and 7th axis for the AX Series. Seamless movements mean a longer life cycle for your cobot.

Small footprint fits easily within your existing floor plan. No need to reorganize your floor layout around a central robot.

Environment built for safe integration; supports third-party safeguard devices.

#### Specifications - Box

Max payload w/ EOAT: up to 16 kg / 35 lb Max box thruput: up to 13 cycles/min\* Min box dimensions: 50x50x50mm/2x2x2in \*depending on box weight, dimensions & surface; plus pallet dimensions & layout

Specifications - Pallet Dimensions:

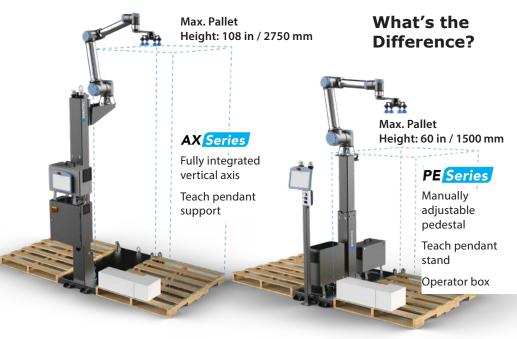
Width: 300 to 1219 mm / 12 to 48 in Depth: 300 to 1219 mm / 12 to 48 in Height (empty), min: 50 mm / 2 in Height (filled), max: AX: 2750 mm / 108 in PE: 1500 mm / 60 in

No. box patterns, max: 2

#### UNIVERSAL ROBOTS SOLUTIONS



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# Typical Turn Key Solutions Starting at \$80,000

Want to learn more?







click here for a quote

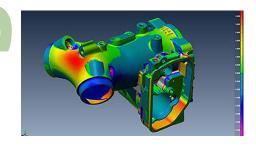
# **Collaborative Robotic 3D Scanning Solutions**

Universal Metrology Automation<sup>®</sup> (UMA) by 3D Infotech is a fully integrated hardware/software solution standardizing quality control and is used by factories looking to remove inspection bottlenecks in production processes.

The UMA platform allows the use of a variety of structured light scanners both red and blue—from many different hardware manufacturers, for measuring details on small parts as well as large surfaces. Each scanner is integrated into 3D Infotech's Streamline software which supports combination of 2D vision, 3D scanning and contact probing devices.

Faster cycle times, highest productivity and lowest cost compared to any other automated metrology system. Easy to use. Rapid deployment. High accuracy: measure parts up to 0.001" (0.025 mm).

Components are built on standards and are easily available, supported and can be replaced. Bi-directional control: logic inputs and outputs to monitor and trigger using industry standards. Easily ties into PLC, SCADA, HMI, Interlock and other systems in the factory.



### **3D Infotech UMA**

UMA Smart Desktop: Used for inspection of small parts in factories that are looking to remove the bottleneck of quality control in production processes. Robot and Tower versions available. 6-axis robot with Rotary Table provides ultimate flexibility on your desktop.

UMA Smart Station: All-in-one solution, available in two sizes to fit every inspection need of your business. Ruggedized cart design allows mobility within the factory. 2x4ft & 3x6ft systems are equipped with UR5 & UR10, workstation and rotary table

UMA Smart Cell: Built on modular industrial frame to enable design changes/ scaling as production processes evolve. Designed for a wide range of part sizes. Additional safety sensors easily integrated when required.

Streamline Software: Provides an interactive common interface amongst all hardware. Easily set up new automated inspection jobs with a variety of robot and scanner brands. Touchscreen user interface is secure and permissionbased

Polyworks: Create and deliver shopfloor-ready inspection projects directly playable with all portable and CNC CMM 3D measurement devices.

Streamline Assist: New workflow tool to take control and improve your handheld 3D Scanning inspection.

Spotlight AR++: Manufacturing inspection through Augmented Reality



**UMA Smart Desktop** 



**UMA Smart Station** 



UMA Smart Cell







# Turn Key Solutions Starting at \$70,000

## Want to learn more?





Measure & record multiple dimensions (both inside & outside features) on every part



click here for a quote

# Automated Small Part Measuring System

The Q-Span<sup>™</sup> Workstation Solution by NewScale Robotics is a complete, readyto-use solution for automating digital caliper measurements, data logging and part handling.

Pick, measure, sort and place with one easy-to-use system. Installs quickly with minimal changes to existing facilities and process flow. Fast part changeover for agile automation.

Q-Span<sup>™</sup> increases repeatability, reduces errors, and boosts job satisfaction by freeing human workers from tedious, repetitive manual measurements and data entry tasks. Rapid return on investment (ROI) of less than 10 months.

Q-Span<sup>™</sup> System software (NSR Devices) and UR teach pendant make it simple to build pick-measure-record-and-place processes for each part. Measure and record multiple dimensions (both inside and outside features) on every part. Automatically record all measured data to a PC for statistical analysis.

#### Specifications

- Handle small parts up to 3.5 ounces (100 grams) & 3.94 inches (100 mm)
- Measure with 0.0001 inches (2.5  $\mu$ m) resolution < 0.0002 inches (5  $\mu$ m) repeatability & < 0.0006 inches (15  $\mu$ m) accuracy



6 OLYMPUS CONTROLS

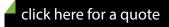






# Q-Span<sup>™</sup> Workstation Solution

- Up to three gripper/calipers
- 2 Accessories configured for your specific part and measurement needs:
  - 2a Metrology fingertips
  - 2 Parts-in & parts-out trays
  - 2c Measurement & zero-reference fixtures w/ gauge block (NIST-traceable artifact)
- 3 Workstation table
- PC & easy-to-use software to grasp & move parts, measure dimensions, make decisions and log data. Includes completed programs for your first part.
- 5 Six-axis robot arm from Universal Robots (purchased separately)
- 6 Delivery, installation, demonstration of your first part inspection, and training





# Typical Solutions \$95,000

Want to learn more?









# Collaborative Robotic 4D Bin Picking Solutions

Apera Vue is Al-powered computer vision software for industrial robots. Vue gives robots human-like perception and speed for robotic guidance in bin picking, packaging, assembly, kitting and other challenging applications.

Apera achieved quantifiable improvements to robotic speed, precision and intelligence while removing the need for expensive hardware, customized programming and tightly controlled operating conditions.

Under ambient light, Apera Al system can handle difficult use cases like clear and shiny objects with an industry-leading vision cycle time as low as 0.3 seconds. That means you can hit the 2,000-picksper-hour mark.

No custom programming needed.

Bin Picking Robotic Guidance Checklist

- ✓ Path planning & pose estimation
- Collision avoidance
- Object identification
- Grasp planning
- Object orientation
- ✔ Object placement



2





- 2D cameras + AI = 4D Vision An AI neural network does the heavy lifting. No structured light necessary, using off-the-shelf cameras.
- 2 Choose your own robot Vue software is compatible with major robot brands, so you can choose the one you like.
- **3** Get a grip Pick the right end effector for the objects being handled
- Fully loaded Apera AI provides a computer preloaded with Vue software.
  New objects can be added remotely or via internal networks.

Apera Al's Vue software can pick & place transluscent objects using Al-powered robotic vision.







**10** OLYMPUS CONTROLS

# Collaborative Robotic Sanding & Polishing

Automate one of the toughest, dirtiest jobs with Robotiq's Finishing Kit — the only complete sanding and polishing solution for Universal Robots. With the Robotiq Finishing Kit, you'll save hours of programming, while increasing quality and productivity, and also reducing worker injuries.

Easy to integrate, easy to use.

Start finishing faster: teach six waypoints and let the Finishing Copilot software generate a complete path, applying consistent force at each cycle.

Supported Materials Robotiq's Finishing Kit covers a wide variety of product finishes:















Includes:

Orbital Tool, Bracket, Sanding Media, Finishing Copilot, Quick Start Guide and Air Control Accessories

Specifications - Random Orbital Sander Maximum Air Supply: 6.2 bar (90 PSI) Air Flow (full speed): 450 L/min (16 SCFM) Pad Diameter: 5 in Media: hook-and-loop, 5 holes Orbit Diameter: 3/16 in Maximum Speed: 12,000 RPM Air Supply Inlet: 1/4 in NPT thread Dust Exhaust Central: vac ready; 1 in dia

Specifications - Robotiq Bracket Weight: 0.42 kg Added Height: 9 mm Control Valve Air Supply Inlet/Outlet: 1/4 in NPT thread Sanding Media Kit Grits: 60, 80, 120, 220, 320, 400:













Tightening up to 140 N·m



**12** OLYMPUS CONTROLS

# Cobot Screwdriving Applications

If precision and consistency are the keys to your project's success, then an automated collaborative robotic screw driver solution may be the answer.

Easy programming and a short average set-up time make automated UR screw driver solutions ideal even for small-volume productions or changing workflows and operational set-ups.

The repeatability of +/- 0.03 mm (.004 in) of the Universal Robots e-Series is perfect for automating quick-precision handling; and their end joints offer infinite rotation for screw-specific applications. Combined with the robot's unique force control, this allows it to be placed directly into a screwing application without the need for a costly torque-controlled screw-driving tool.

# **High Torque Solution**

High-torque cobot tightening up to 140 N·m (103 ft. lbs).

Made possible by combining UR's cobot with ESTIC's patented pulse technology, which significantly reduces torque reaction, thus the load to cobot joints.

Automate tightening process while using features such as cross-thread detection, torque traceability, etc. A Bolt feeder is also compatible with the system.



lloT

# Robotic Screwdrivers

Easily automate assembly processes with the robotic screwdrivers for collaborative robots. Intelligent error detection and multiple screw size handling will ensure consistent results and reduce cycle time dramatically.

Cobot screwdrivers are able to handle a wide range of screw sizes. Changeovers to a different screw type or size take just minutes, reducing downtime and boosting ROI. Torque control ranges enable consistency and accurate screwdriving.

# **Screw Feed Options**

#### Presenter

Sorts screws and presents them in a fixed repeatable position and orientation for the robot to pick up with the screwdriving tool before inserting them into the workpiece. Minimal integration required.

#### Automatic

Feeds screws through a tube directly to the head of the screwdriving tool ready to be inserted into the workpiece. The screws are usually sorted by a bowl feeder before being inserted into the tube to go to the robot. Short robot cycle time; entirely automated.

#### Pre-mounted Screws

Screws are already mounted onto the workpiece and just need to be tighentened to the correct torque by the robot. Low cost; short robot cycle time.

click here for a quote





Want to learn more?







14 OLYMPUS CONTROLS

# **Robotiq CNC Machine Tool Tending Solution**

Machine tending is one of the most common uses of collaborative robots on the market. A robotic machine-tending process can be repeated endlessly, as long as the robot continually receives raw parts.

Some industries use robots for a single step of production, like emptying injection molding machines or CNC machines. When production is running around the clock, robots let you minimize cycle time and run the process continuously by removing parts from the machine's work area.

Robotiq brings an optimized solution for CNC machine tending apps to improve cycle times, optimize programming, and handle complex part presentation. You get all the components you need to operate a CNC machine with a cobot in Robotiq's CNC Machine Tending Solution.

Includes:

- Dual Hand-E grippers with an angled bracket (90°)
- Fingertips starter kit, includes a fingertip extender for larger parts
- Machine Tending Copilot software, includes Force Copilot & Contact Offset
- Robotiq Wrist Camera (optional), includes new Visual Offset function
- eLearning course: How to Best Use Kit



# Automated Robotic Machine Tool Tending

Robotic machine tending allows you to produce more product and do it more consistently for your shop. These systems connect right into your CNC or other automated machine.

Many brands are eligible for automation for example: Hurco, Docsan, Matsuura, Mitsubishi, Hyundai, and more!

# Made4CNC Door Opener

SD100 Safedoor is a unique automatic door system, specially designed for robotic tending of CNC machines:

- Fits all door-openings up to 1m
- 1-2 hours installation time

If required, stopping force and maximum traversal speed can be adjusted during installation. Contains 1 controller-unit and 1 or 2 actuators depending if your CNC machine has 1 or 2 doors.

# FlexxBotics FlexxCNC<sup>™</sup> Interface

Enables you to automate all aspects of your CNC. Execute G-Code, actuate vises/chucks/doors, initiate stop/ start/wait cycles and connect to any other peripherals all through polyscope.

Compatible with a majority of CNC machines giving you the ability to standardize this solution across your shop. FlexxCNC<sup>™</sup> helps you to:

• Reduce robot integration time

**Ouestions?** 

- · Redeploy robot on multiple machines
- Run commands to your machine
- Simplify robot-to-machine operation









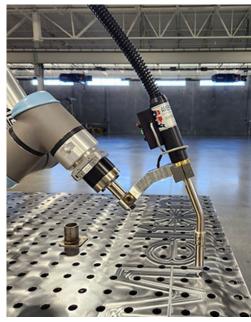


Collaborative Robotic Welding

Cobot Welding Tools help manufacturers boost productivity amid the shortage of skilled labor by reducing the learning curve, setup time, risk and the cost of robotic welding.

Powered by either a Universal Robots UR5e or UR10e collaborative robot, the Cobot Welding Tool is portable, safe, versatile and ex-tremely easy-to-use. Most users are set up and welding within a few hours of arrival — with no programming experi-ence necessary. Solutions for both MIG and cold-wire fed TIG are avaliable.

The DIY install, setup and intuitive programming interface save you valuable time and money, as there's no need to fly anywhere for training nor pay a tech to come to your site.



# Collaborative Robotic Welding

The Olympus Control Cobot Welding system is fully integrated onto a 3ft x 6ft mobile modular fixturing cart so you can take the cobot to the work — or the work to the cobot — whatever is best for your shop's flow. No anchoring nor dedicated footprint required.

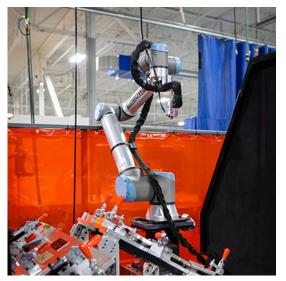
Don't have 480V or three-phase power? No problem, the cobot runs off a 120V wall outlet and the welder can run on anything between 208V and 575V — including 240V single phase.

A 30-day return policy, rent-to-own program and fast lead times provide you with peace-of-mind to quickly start automating simple, repetitive parts — freeing up your manual welders for more complex weldments or other value-add tasks.



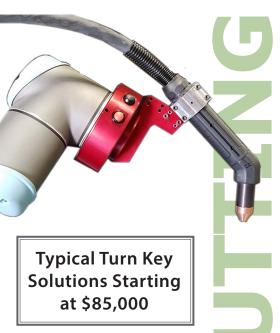












Want to learn more?











A cobot plasma cutting tool allows non-welders and non-robot operators to easily cut shapes into three dimensional, structural-steel components.

Utilizing a UR collaborative robot arm, a Hypertherm cutting torch is manipulated to the desired positions around the cutting path.

Standard shapes like squares, rectangles, circles are included in the software — or C-channels can be selected for parametric programming. The operator will simply move the cutting torch to a few locations on the cutting surface, hit run, and watch the sparks fly.

If you need a non-standard shape, you can program it yourself and insert the pre-programmed instructions for cutting control or have Olympus Controls add the shape to the parametric programming interface.







WHERE INNOVATION MEETS AUTOMATION®

# **Robotic Adhesive Dispensing Systems**

Robot27's easy-to-implement cartridgebased dispensing kits rapidly turn the Universal Robot platform into precision dispensing machines.

Integrated with entire Universal Robots platform, Robot27's adhesive dispensing kits can be used with UR3e, UR5e, UR10e and UR16e robots interchangeably.

System includes precision pressure and vacuum controls, robot interface hardware, plus universal syringe/cartridge mount kit for rapid changeover of different adhesive types, syringe volumes, and dispensing tips. Applicable to most adhesives as well as fluids, gels, sealants.

Offering multiple dispensing options for the most demanding and precise applications, including: the Robotic Adhesive Dispensing (RAD) Kit with 3-55cc syringes; the Direct Dispense (DDS) Kit with 300 ml cartridge; and the TPS (Two-Part Small) Kit with 50ml Dual Cartridge.

Kit includes: end effector, pressure control unit, UR Cap on USB, guick start manual

#### Specifications

Software required: UR Cap, included Dispense pressure: 10-85 psi Ideal viscosity: low-medium Electrical power: connects directly to robot controller



# **Typical Solutions** Starting at \$45,000

# Want to learn more?

Click here







# Contact Us for More Info! 503.582.8100



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