

SMARTER TIRE PROCESSING. BETTER RESULTS.

Motion Controls Robotics integrates tire-processing systems that combine controlled fluid application, robotic handling, and automatic measurement. Tires arriving in random order are positioned, measured, and processed using either an operator-entered spray value or parameters from the customer's recipe system. Optional onboard recipe management is available.

These systems contain the overspray and process materials while applying the required amount of fluid to each tire. Production information is displayed on the operator screen, with optional ImpactIQ tracking and reporting.

THIS COMBINATION ADDRESSES WHAT MATTERS MOST:

QUALITY | CONTAMINATION CONTROL | MATERIAL WASTE | ERGONOMICS | UPTIME



Explore Tire Automation

1



Identify

Barcode selects a recipe, or vision reads each tire's profile.

2



Handle

Robotic or safe handling positions for every tire.

3



Adjust

Dimensions, recipe, and spray pattern adjusted in real time.

4



Apply

Precise application of fluid release or paint.

5



Inspect

Vision locates high-point marks or conicity stripes and verifies color.

Applies primarily to tire-marking applications.

6



Track & Report

ImpactIQ provides process tracking and reporting.

Optional



THE RIGHT PROCESS, EVERY TIRE, EVERY TIME
motioncontrolsrobotics.com

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GREEN TIRE SPRAYING SOLUTIONS

Consistent mold-release application with less waste and better uniformity



PRECISION FLUID DELIVERY

- Closed-loop control
- Recipe or vision based application
- 25–50% less fluid consumption
- Reduced overspray and waste
- Inside spray (i) and/or Outside spray (o)

RTS PLATFORM

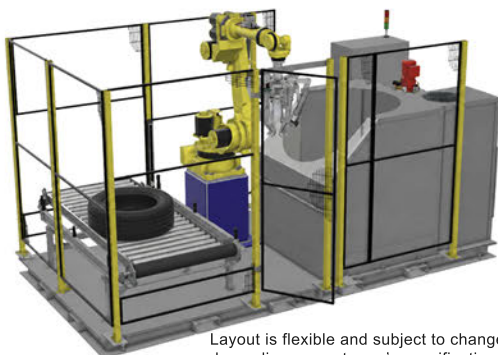
Single-station robotic spraying



Mixed Tire Processing



Adaptive Measurement



Layout is flexible and subject to change depending on customer's specifications

The robotic green tire spray system measures each randomly arriving tire, adjusts to its dimensions and recipe, and applies the required amount of mold release.

RTS1000



Passenger & Light Truck



FANUC R1000 Series Robot



6 TPM

RTS2000



Medium Radial Truck Tires



FANUC R2000 Series Robot



4 TPM

DTS PLATFORM

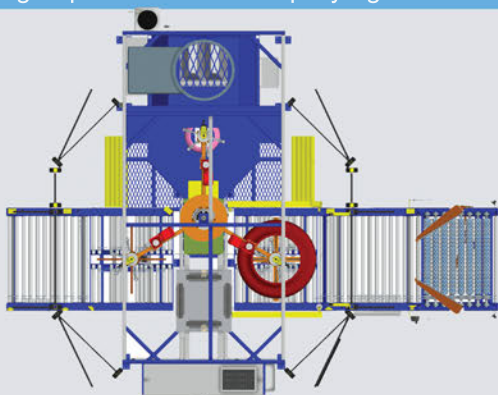
High speed dual index spraying



High-Volume Production



Low Overspray Design



Multiple stations run in parallel to increase throughput and reduce cycle time. Precision fluid control applies the required amount of mold release with less overspray and waste.

DTS1000



Passenger & Light Truck



Dial-Index Multi-Station



12 TPM

DTS2000



Medium Radial Truck Tires



Dial-Index Multi-Station



6 TPM

HTS PLATFORM

Portable manual tire spraying



Self-Contained and Portable



Backup and Low-Volume Production



Self-contained and portable. Keeps production running during maintenance outages or for low volume needs.

HTS100



Passenger & Light Truck



Manual Load/Unload



3 TPM

HTS1000



Agricultural Bias Ply Tires



Manual Load/Unload



3 TPM

*Vertical VTS configurations are also available for utility, ATV, and specialty tires.



GREEN TIRE SPRAY SYSTEM COMPARISON

Model	Tire application	System / loading	Spray area	Robot	Rate*
RTS1000	Passenger & light-truck radial	Single-station robotic; random arrival and automated handling	Inside (i), Outside (o), or Combined (io)	FANUC R1000 Series	6 TPM
RTS2000	Medium radial truck tires	Heavy-duty single-station robotic handling	Inside (i), Outside (o), or Combined (io)	FANUC R2000 Series	4 TPM
RTS900	Agricultural and off-road	Heavy-duty single-station robotic handling	Inside (i), Outside (o), or Combined (io)	FANUC M900 or M410 (700kg); FANUC M10 for spraying	12 TPH
DTS1000	Passenger & Light truck tires	Dial-index multi-station; parallel load, spray and unload	Inside (i), Outside (o), or Combined (io)	No robot - dial index	12 TPM
DTS2000	Medium radial truck tires	Heavy-duty dial-index multi-station	Inside (i), Outside (o), or Combined (io)	No robot - dial index	6 TPM
HTS100	Passenger & light truck; new tire trials	Portable horizontal system; manual load/unload	Inside & outside (io)	No robot	3 TPM
HTS1000	Agricultural bias-ply tires	Horizontal system; manual load/unload	Inside (i)	No robot	3 TPM
VTS1000	Utility, ATV & specialty bias-ply	Vertical system; application-specific loading	Inside & outside (io)	No robot	3 TPM

Abbreviations: i = inside spray; o = outside spray; io = inside and outside spray; TPM/TPH = tires per minute/hour. *Rate may vary based on spray configuration and tire size.

TIRE PAINTING & MARKING SOLUTIONS

Robot-applied marking and vision verification for precise, repeatable tire identification.



PAINTING & MARKING

- Precise, repeatable marking
- Clean paint application
- Branding and identification support
- Wheel-matching marks available
- Multiple marking styles available



IMPROVE TRACEABILITY.
MEET OEM REQUIREMENTS. **ENHANCE BRAND VALUE**

WHITE LETTER PROTECTION



Applies a protective blue coating over white lettering.

WHITEWALL PROTECTION



Applies a protective blue coating over whitewall areas.

HIGH POINT PAINTING



Marks the tire's high point for match mounting to the wheel.

CONICITY TREAD STRIPING



Applies color-coded tread stripes to identify conicity direction for tire matching and assembly.

Robotic White Wall Tire Sprayer



Robotic OEM Tire Marking Machine



TIRE HANDLING, ASSEMBLY & QUALITY SYSTEMS

Automate movement, assembly, inspection, and verification throughout tire production.



Bladder Spray Systems



Robotic Bead Loading



AGV/AMR Tire Transport



Precision Fluid Systems

TIRE PROCESSING CAPABILITY COMPARISON

System	Spray	Mark / paint	Handle / assemble	Inspect / verify	Robot / equipment	Best for
Robotic Green Tire Spraying	✓		✓	Optional	RTS1000i: FANUC R-1000; RTS2000i: FANUC R-2000	Random-arrival passenger, light-truck and medium truck tires
Dial-Index Green Tire Spraying	✓			Optional	No robot - indexed multi-station equipment	High-volume passenger, light-truck and medium truck production
Manual Green Tire Spraying	✓		Manual		No robot	Backup, trials, maintenance coverage and low-volume production
Custom Robotic Green Tire Spraying	✓		✓	Optional	Application-specific FANUC robot	Large AG/OTR systems, Unique tire sizes, layouts, recipes and engineered applications
Bladder Spray System	✓		✓	✓	Automated conveyor with precision fluid delivery	Consistent release coating for longer bladder life and improved tire uniformity
White Letter Painting		✓		Optional	Application-specific FANUC robot	Brand lettering and precise placement
White Wall Painting		✓		Optional	Application-specific FANUC robot	Bright, even OEM-style whitewalls
High Point Painting		✓		✓	Application-specific FANUC robot	Marking the high point for wheel matching
Conicity Tread Striping		✓		✓	Application-specific robotic or dedicated marking system	Color-coded tread stripes identify conicity for tire-to-wheel matching and vehicle assembly.
Robotic Bead Loading			✓	Optional	FANUC robot; model application-specific	Accurate bead placement and reduced manual handling
Robotic Tire Handling			✓	Optional	Heavy-duty FANUC robot; model application-specific	Loading, unloading, orientation and positioning
Marking Verification Systems				✓	No robot required; industrial vision camera	Color, placement, count and traceability verification
Precision Fluid Systems	Supports			Process monitoring	No robot by itself; integrated pumps, valves and controls	Closed-loop, recipe-based application with reduced waste

Backed by patented technology, including U.S. Patents 7,943,201; 8,646,404; 9,192,953; and 9,884,338. Additional patents pending. Robot selections for custom systems depend on payload, reach, cycle time, tire size and process layout.

Service First
24/7/365 SERVICE, PM, SPARE PARTS & MORE



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