

Improve welding throughput with automated part repositioning

MotionPlus Advanced for external multi-axis coordinated motion

Is your welding efficiency slowed by manual repositioning?

When sheet metal fabricators need to manually weld complex parts, large components, pipes, or vessels, the physical positioning & re-positioning of these parts can extend production times, create poor welding ergonomics, and lead to inefficient processes that can result in rework or lower quality.

Meet MotionPlus for smarter welding automation

To automate part repositioning more effectively, fabricators often rely on their integrators to incorporate external rotary axes with the welding robot.

MotionPlus, UR's software solution, brings advanced multi-axis motion control of up to six external axes, rotary or linear, precisely driven using EtherCAT*. This capability is especially valuable for welding tubes, pipes, flanges, spools, tanks, pressure vessels, and other cylindrical or rotating parts.

The result? Higher productivity, consistent weld quality, and a safer, more ergonomic working environment.



Key benefits for welders and operators

Seamless integration and real-time control:

- Precise coordinated motion of multiple axes for complex part welding, with a standard interface to many third-party servo drives and motor options.
- Easy programming: Intuitive URScript commands to achieve precise and complex motion on rotating parts.
- Boost arc-On time: Automated toolpath handling on rotating parts means less manual intervention and more welding.
- Consistent quality: Synchronized start/stop motion ensures repeatable, high-quality welds.
- Better Ergonomics: Reduce manual repositioning and awkward welding positions.



How to get MotionPlus?









Choose a Motion Plus-enabled solution from trusted partners like Vectis, THG Automation, Oh-Au2mate, Olympus Controls, Festo, and WeCobot, providing ready-to-deploy motion solutions for your UR robot.

Product compatibility guide

Product	Part number	Compatible Software	Compatible Control Box	Compatible Robots	License duration	Recommended servo drives**
MotionPlus Advanced software	1010556	PolyScope X	CB 5.6	UR series e-Series	Perpetual, per robot	Yaskawa Mitsubishi Festo Kollmorgen Oriental Motor Coply Controls Nanotech
		PolyScope 5.21+	CB 5.5			

Terms & conditions:

- One robot per license
- Grants access to future releases, upgrades, and bug fixes.

*EtherCAT is a registered trademark and patented technology, licensed by Beckhoff Automation.

**Recommended servo drives have been tested in UR labs and checked for MotionPlus compatibility. Other EtherCat enabled drives may work with MotionPlus but would require compatibility testing.

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