ABB introduces new robotic laser cutting solutions.

High precision robotics laser cutting is made easy, and delivers greater manufacturing flexibility for up to 35% lower capital investment.

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ABB has introduced two new software tools designed to make robotic laser cutting more accurate, more flexible and easier to use.

Using robots for laser cutting offers substantial cost benefits compared to traditional five-axis laser cutting machine, and they occupy less floor space, whilst allowing production layouts to be optimized – thus saving both production space and cost. In many cases robotic laser cutting allows one or more costly manufacturing operation to be eliminated, resulting in more efficient production processes.

RobotStudio Cutting PowerPac is an add-in to RobotStudio, ABB’s 3D simulation tool. The software, specifically designed for laser cutting, allows users to easily generate & modify cutting programs based on part geometry & CAD models. It also supports simulation & optimization of cutting programs, set up of interface signals, and management of cutting process data.

Commenting on the new software, ABB Product Manager, Andreas Eriksson says "It is easy and efficient to program even complex paths and shapes using the sophisticated Cutting PowerPac add-in. Users can create & test advanced laser cutting programs in an office environment, which maximizes production uptime and resource efficiency."

The Cutting PowerPac add-in is seamlessly integrated with the second software tool, RobotWare Cutting. This is a robot controller add-in for tuning, calibration, equipment integration and program generation of complex paths and shapes. RobotWare Cutting is compatible with most common laser cutting equipment brands and its intuitive graphical user interface makes it easy to use. You can also use the interface to switch automatically, and rapidly, between different product series, opening up the possibility for fully flexible production, where even short series manufacturing can be made profitable.

ABB robots using RobotWare Cutting are also capable of "learning by doing" says Eriksson. "In developing this new software we have included an advanced Iterative Learning Control (ILC) algorithm that enables a laser cutting robot to continually improve its cutting performance and accuracy.

Users of ABB Robotics' laser cutting systems also have to all the benefits of ABB’s Remote Service, a system which provides remote access to the system for production monitoring, fast diagnostics and predictive maintenance.

All ABB Robotics' products are fully supported by the ABB Robotics' global sales and service organization in 53 countries and over 100 locations.

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