Robotics

ABB Machine Tending Software
Easy, flexible and trouble-free system for robotic machine tending

ABB Machine Tending Software

An integrated set of software tools that uses ABB's extensive experience in machine tending to reduce operational expenditure and increase productivity through easy and flexible programming, straightforward configuration and trouble free operation of ABB robots.

Machine tending robots have provided a host of dramatic benefits to the industry including reduced costs, increased throughput, lowered waste and higher quality. Since the world's first commercial delivery of an electrically-actuated robot in the 1970's, ABB has continually developed ever more innovative robotic machine tending solutions.

With more than 30,000 machine tending robots installed globally, this deep experience has culminated in ABB's RobotStudio Machine Tending PowerPac and RobotWare Machine Tending software. Both work seamlessly together to facilitate simple programming, quick installation and trouble-free operation of robotic machine tending processes. For everything from die-casting to injection molding and machining, this new package delivers world class flexibility and ease-of-use.

Easy and Flexible Programming
The combination of plug-and-play PC-based software tools and flexible controller software makes for easy programming, configuration and operation of machine tending tasks. With built-in support for most machines and peripheral equipment, getting a cell up and running in the 3D virtual world can be accomplished before actual installation of components has even begun.

The PC-based RobotStudio Machine Tending PowerPac and the robot controller-based RobotWare Machine Tending are designed to work seamlessly together. In RobotStudio everything from cycle times to post processing to potential risks for collisions can be visualized in 3D before costly mistakes occur in the real world. On the controller side, ABB's RobotWare Machine Tending software provides a flexible, programming framework and intuitive graphical user interface with powerful tools whether you are a RAPID programming expert or not.

Together these two pieces of software contain a large library of common machine tending functions that can be re-used and modified to meet the customer's needs. This modularity makes the customer less dependent on any one specific programmer.

Injection moulding, loading and unloading

Straightforward Configuration

By combining a powerful offline programming tool with customizable and highly flexible controller software, ABB's goal is to make configuration and control of robotic machine tending solutions easier than ever before.

RobotWare Machine Tending is highly intuitive and makes common operations simple, reducing costly errors that may damage the robot, gripper and parts.

ABB's innovative and customizable controller interface allows for easy configuration of stations, grippers and tools. Monitoring of program execution and robot movement is intuitive via a graphical overview of the cell layout on ABB's FlexPendant handheld control device.

Trouble-free Operation

The combination of straightforward configuration and easy control means there are fewer chances for costly errors and a reduced need for trained operators when using ABB's machine tending software.

An automatic and safe HomeRun feature allows even untrained individuals to safely bring the robot to a home position with the tap of a button – avoiding the risk for collisions. Tasks such as selecting pre-defined cycles, and modifying actions while the robot is running can be completed even by less trained individuals.

Advanced error handling is borne out in easily accessible, color-coded event messages, while error recovery is controlled by an advanced debugging feature that allows an operator to quickly track down the error-causing problem.

Summary of Benefits

Easy to program
PC-based programming is faster and reduces downtime; programming on the controller is easier than ever

Flexible
Modular programming structure, intuitive graphical user interface and unlimited access to RAPID

Easy to control
Cycle handling and program control through an intuitive interface

Quick installation
Plug-and-play seamless integration between PC-based and controller-based software

Trouble-free
Safe Home Run, advanced error handling, easily accessible production statistics, quick re-programming and fast error recovery
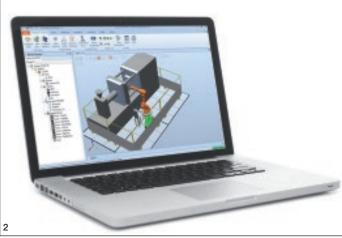
Typical Machine tending applications
– Die Castinmg
– Injection moulding
– Machining

Typical Machine tending tasks
– Part insertion
– Loading
– Unloading
– Post processing (l eg inspections and trimming)
– Part extraction

1. ABB's FlexPendant operator device has an intuitive graphical user interface that is fully customizable to the user's requirements. | 2. RobotStudio is a graphical programming environment that allows robots to be programmed offline, reducing downtime while minimizing the risk of programming error.

Contact us

www.abb.com/robotics

Power and productivity
for a better world™

ABB