Easy automated machining
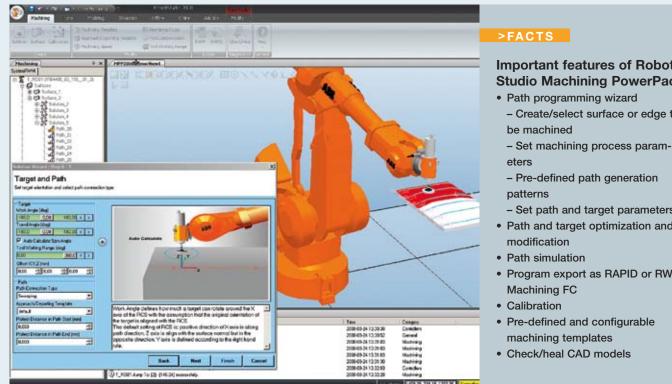
RobotStudio uses an exact copy of the software used to run the robots in production.

With the RobotStudio Machining PowerPac, robots can be programmed offline for complex machining operations with less risk – and in less time.

> Machining of parts has long been done manually by the foundry industry – the irregular surfaces and flexibility required were considered best done by hand. But robots are ideal for machining applications, with their ability to work efficiently and provide an unparalleled consistency. To ensure easy robot programming, which is key to optimizing the potential of automated machining, ABB has developed the RobotStudio Machining PowerPac.

RobotStudio uses an exact copy of the real software that runs robots in production, so realistic simulations can be performed, using real robot programs and configuration files identical to those used on the shopfloor. Time and risks are reduced by programming robots offline, in addition to more accurate paths being created.

Using the Fluent user interface from Microsoft Office 2007, the RobotStudio Machining PowerPac features an intuitive wizard to guide users in creating targets and paths from surfaces and edges quickly, easily and accurately. Pre-defined path generation patterns are provided to support all possible machining types. All process setting such as tool width, overlap rate, machining angles, etc., can be defined in different pages of the wizard. All these settings will be used to generate the targets and paths. And wizard pages can be browsed forward and backward to adjust process settings. In the last wizard page, a preview is provided to show how the paths look like before they can be finally created.

The PowerPac includes three machining templates as default: NormalProcess, FC (Force Control) PressureProcess and FC SpeedChangeProcess. All of the parameters in the templates can be customized and re-used among different cases.

Because the Machining PowerPac supports force controlled processes, it works seamlessly with ABB's software for force controlled machining, RobotWare Machining FC, and the program generated in Machining PowerPac can be imported into and recognized by RobotWare Machining FC. ⊙