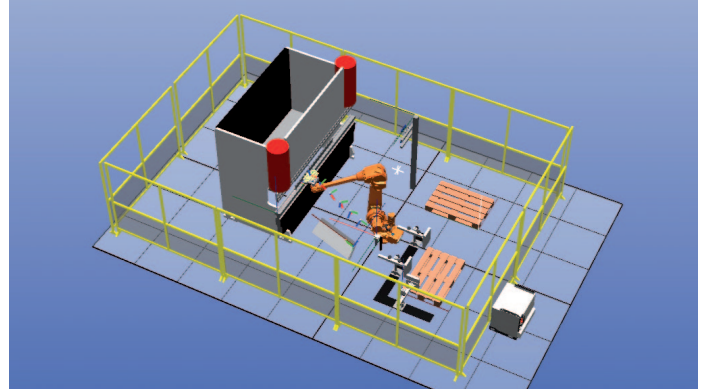# Bending PowerPac
# Industrial Software Product

**The Bending PowerPac is a powerful tool to support the complex task of finding feasible bending sequences and the best solution for the robotic station including the robot itself and the required programming for the press brake.**



PowerPacs are "plug-ins" for use with ABB's offline programming system, RobotStudio,enabling the programming software to be used for specific applications. Bending PowerPac is an innovative software product developed for easy and fast offline programming of complicated press brake tending applications. The Bending PowerPac, patented by ABB, is the result of years of development and incorporates ABB's experience and know-how in robotics press brake tending applications.The PowerPac requires minimal operator skills to program a small batch production. Once programmed, robots can begin work with none of the costs associated with recruitment or ongoing training and can provide great flexibility, in terms of work patterns and the ability to handle different production tasks.

The software's offline programming ability will help to offer a total solution both offline and online, particularly where BendWare is embedded. BendWare, which provides for the control of the robot and its peripheral equipment, enables virtual simulations of the whole process, including collision checks, and cycle time evaluation.

### BendWare and Bending PowerPac
BendWare is an additional RobotWare option with an open interface, simple to customize for any Press Brake manufacturer.  It comes with a multi language user interface.

The interface between BendWare and Bending PowerPac is a RAPID module, which includes targets, paths and work objects. The output RAPID module from BPP together with BendWare engine compose a whole bending program. The user needs to calibrate work objects before real production.

### Programming with Bending PowerPac
As a first step in the programming of a new product, the user has to import the DXF drawing of the part and then make the virtual set-up of the press brake, using the  tools provided. The bending sequence is defined in an interactive way through the simulation of the robot and press brake cycle, verifying step by step to ensure the programming data is accurate, including:

– The robot's working area
– Interference or Collisions
– Reachability

The final result is the generation of an offline-programming schedule that can be directly downloaded to the robot controller for use in the actual robot cell.

**Power and productivity**
**for a better world™**

ABB

# Enjoy the power of true offline programming

Bending PowerPac is sequentially structured of four different programming environments, including:

### Working cell configuration and set-up
The working cell configuration provides a definition of the layout through the selection of all system components and their positions. Libraries are available for all the robot models, system modules and the models of the press brake.

### Part definition
In order to define the geometry of the part to be programmed, it must be imported through the use of a DXF drawing, or simply recreated using an incorporated CAD system.

### Workcell set-up
Defining the set-up of the press brake requires an awareness of the different set of tools required, including the robot grippers and other adjustable modules included in the robotic system.

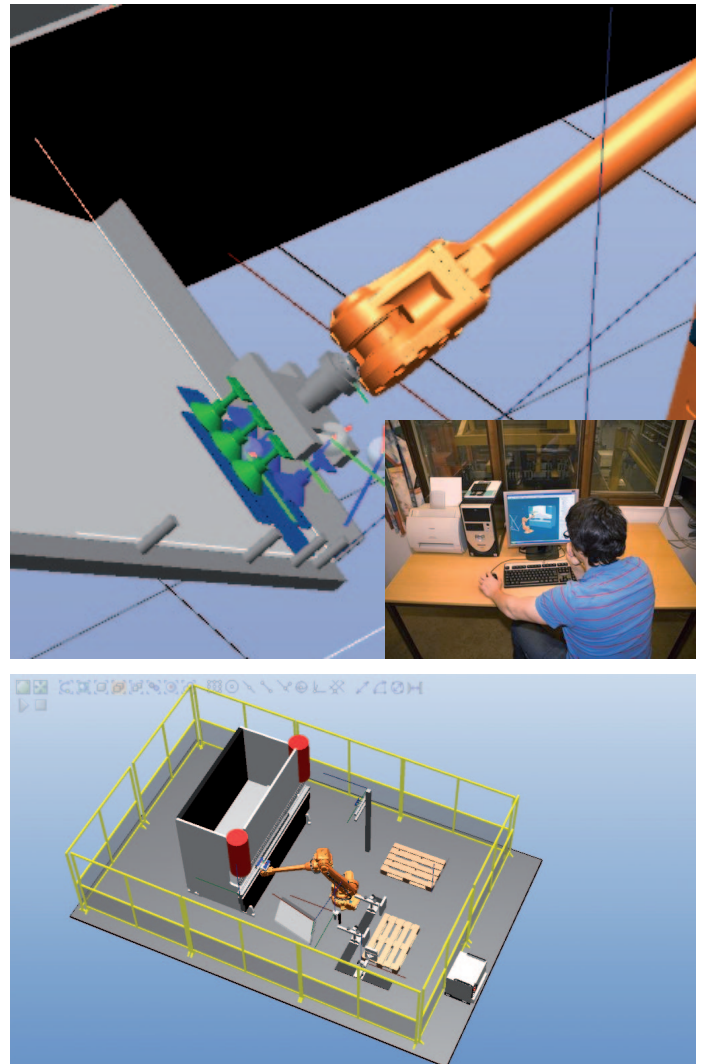### Defining the Bending sequence
The graphic interface of the Bending PowerPac, combined with its functionality, makes it easy for operators to program and create simulations for the robots even with a limited knowledge of robotics and PC software. The Bending PowerPac uses 3D graphics based on solid modeling that makes movement within the virtual cell simple and easy for checking the bending sequence.

### Facts about RobotStudio:
RobotStudio is an offline programming system that enables you to build an exact virtual copy of a real ABB robotics system. The programming software has the ability to seamlessly download programs to the ABB robot without any post-processing or filtering required.

RobotStudio utilizes ABB VirtualRobot™ Technology to create offline robot simulations that are easily activated into live productions. With VirtualRobot Technology, you can be assured that your programs are accurate and ready to go without any costly delays!

RobotStudio PowerPacs are available for a wealth of different applications including arc welding, painting, machining and machine tending.

www.abb.com/robotics

Power and productivity
for a better world™

ABB