

# AutoForm- HemPlanner

Software for Efficient  
Planning of Hemming Processes



- ▶ Efficient planning of hemming processes to meet quality and cost requirements
- ▶ Support of roll and table top hemming
- ▶ Effective implementation for early feasibility and final validation studies, choice of appropriate hemming technology and equipment, tool design and process planning
- ▶ Rapid identification of typical hemming defects, including splits and wrinkles in the flange, material overlaps and material roll-in
- ▶ Prediction of full assembly springback after hemming



**AUTOFORM**  
*Forming Reality*

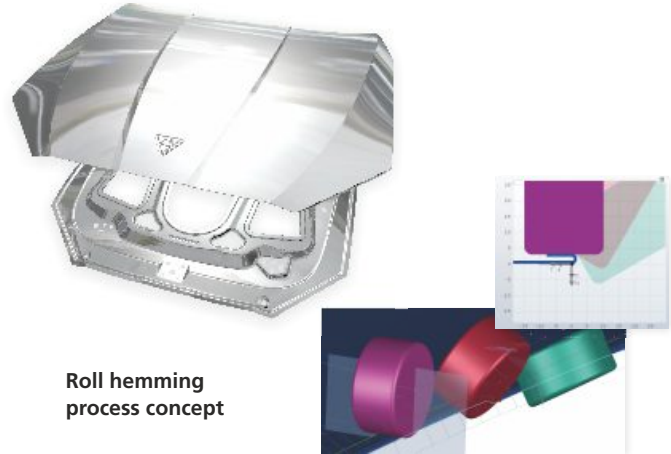
# AutoForm-HemPlanner

## Streamlined Hemming Process Definition

AutoForm-HemPlanner enables users to easily define and optimize the hemming operation. Various hemming processes can be designed to evaluate whether the choice of flange outline and flange opening angle are accurate. In addition, the software allows for the prediction of full assembly springback after hemming.

With AutoForm-HemPlanner, definition of the hemming process is streamlined since the design of tool active faces is no longer merely based on experience and the costly principle of trial-and-error. AutoForm-HemPlanner supports roll and table top hemming. Depending on the product development process phase, AutoForm-HemPlanner supports two use cases, namely quick and advanced hemming.

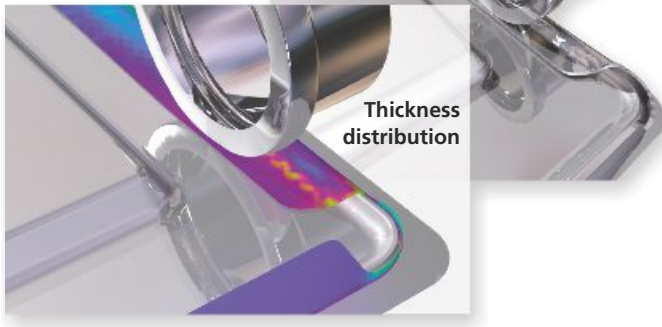
Quick hemming is used in the early stages of product development and production planning, when the die layout of the drawing and forming operations is still not available. The CAD geometry of the flanged as well as hemmed parts provides the main input for the design of the hemming operation. The advantage of quick hemming is that multiple simulations can be run in order



to rapidly evaluate various process concepts and possible geometry modifications that will result in manufacturable parts. For example, the flange outline and flange opening can be validated at the same time.

Advanced hemming is used in process engineering when the detailed definition of the forming operations is available. The accuracy of simulation results is increased by taking into account the history of material deformation accumulated throughout the previous manufacturing operations. Advanced hemming is used to validate the selected hemming concept, i.e. validate the design of the clamping fixture, check if the spring supported roller follows the predefined trajectory, evaluate the potential hemming defects as well as predict full assembly springback. These information form the basis for compensation of inner and outer parts as well as any adjustments of the hemming equipment.

### Roll hemming



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