



BORN TO ENGINEER

ENGINEERING SERVICES

## Design Automation for validation of Infeed screw and Starwheel

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| <b>Product</b>         | Infeed screw and Starwheel   |
| <b>Objective</b>       | <ul style="list-style-type: none"><li>• To virtually simulate bottle handling through Starwheel and Infeedscrews</li><li>• Harmonize the bottle design with the size parts design and checkdenting, jams, scratching</li><li>• Get 3D/2D drawings automatically of the changeover parts</li><li>• Build up 3D database for existing packaging line</li></ul>   |
| <b>Customer Inputs</b> | <ul style="list-style-type: none"><li>• Existing bottle, Starwheel, Infeed screw and conveyor drawings</li><li>• Video of bottle movement in packaging line</li><li>• Operating conditions</li></ul>   |
| <b>Challenges</b>      | <ul style="list-style-type: none"><li>• Identify key parameters of various components such as Infeed screw, Starwheel and bottle</li><li>• Suggest best guess for contact cards, location of side rails along with other components</li></ul>  |
| <b>Our Approach</b>    | <ul style="list-style-type: none"><li>• Develop design procedure for<ul style="list-style-type: none"><li>▪ Main parameter calculation of Starwheel and Infeed</li><li>▪ Starwheel, Infeed height, Starwheel pocket parameters</li></ul></li><li>• Develop methodology for CAD and simulation parameterization</li><li>• Develop methodology for design optimization – Robust design of Starwheel and Infeed screw, optimum number of side rails and their positioning</li></ul> |
| <b>Benefits</b>        | <ul style="list-style-type: none"><li>• Designs can be evaluated much earlier in the product development cycle</li><li>• Help customer to understand how bottles of various design will perform on typical conveying systems</li></ul>   |