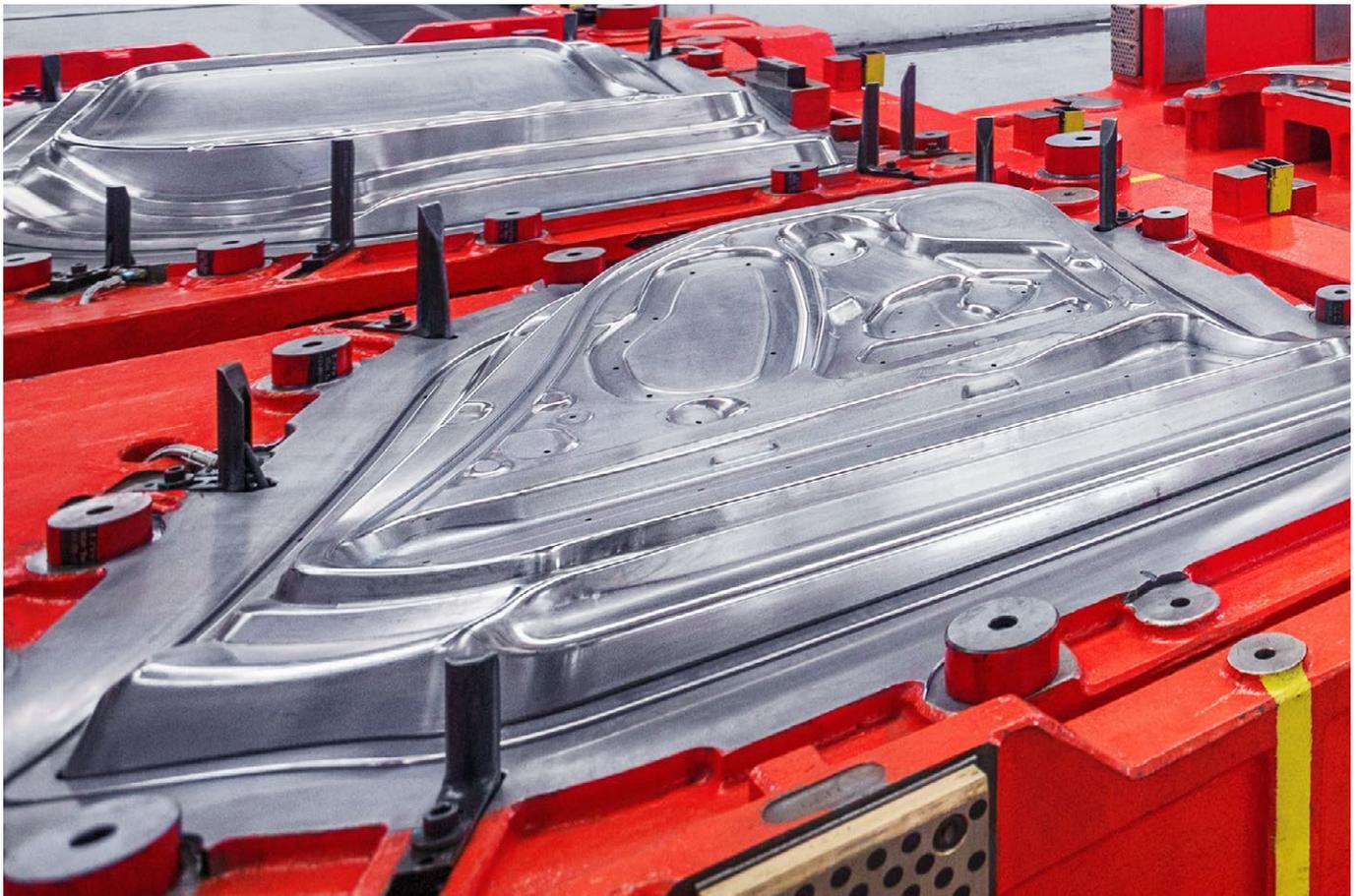


SCULPTURED DIE FACE

FAST DIE FACE DESIGN FOR DEEP DRAWN PANELS



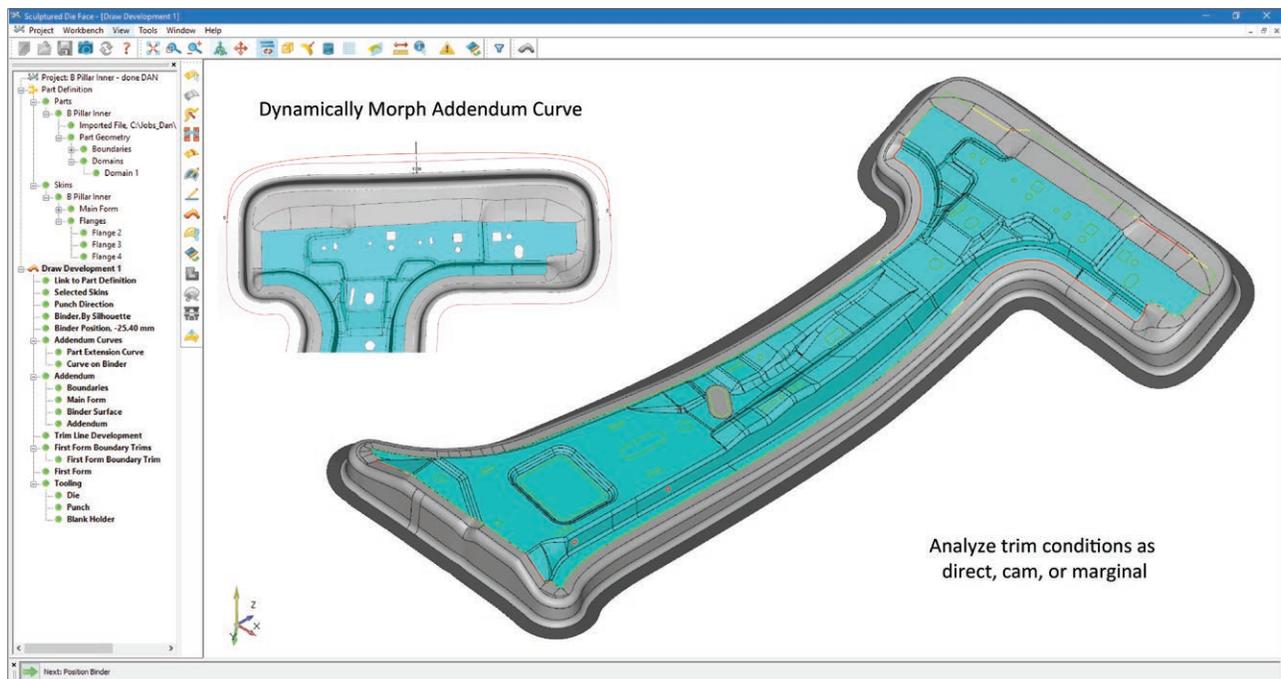
FormingSuite® SCULPTURED DIE FACE enables cost engineers to quickly create and morph die face designs to accurately capture the true metal forming process. Drawn components require extra material (die face) to allow the required metal flow. In just a few minutes, SCULPTURED DIE FACE quickly and easily creates hundreds of surfaces to represent the first form draw and thus provides more accurate blank shapes for drawn panels. This is essential for determining accurate material costs and scientifically estimating tooling costs.

SCULPTURED DIE FACE

Cost Engineers are required to consider the die face for drawn panels in order to control the metal flow. SCULPTURED DIE FACE is a streamlined draw die development software that quickly produces first form geometry. It considers die tip to minimize draw depth, initial punch contact, balances trim angles to minimize cam operations, creates developable binder surfaces, establishes punch opening line and extends addendum surfaces beyond component's trim line. SCULPTURED DIE FACE smoothly links all the data into a viable first form geometry for downstream processing.

Typically, extra material is added to the original component shape (punch extension curve) to enable metal flow from the part shape to the binder to lessen forming severity. Flanges can be laid out on the punch face, die face or binder. A highly interactive morphing tool enables the user to shape the extra material to allow the metal to flow smoothly over more complex transition areas.

The result is a full defined feasibility die face used for cost engineering to establish the minimize blank size for drawn panels. Tooling engineers can generate and evaluate several tooling concepts in minutes. This data is seamlessly passed to COSTOPTIMIZER® for costing and estimating with speed and accuracy.



Develop a full die face or draw die development model in minutes

FEATURES

- Create first-form draw models for accurate material cost estimates for drawn panels
- Performs stamping feature recognition to remove secondary operations from first form draw
- Determine impact of developing flanges on punch face, die face, or binder
- Optimize press axis direction for minimizing undercut or draw depth while analyzing trim conditions, draft angle and undercuts
- Construct complex, developable curved binder geometry using a variety of powerful, industry driven approaches
- Accurately develop trim lines for flange, hem and extrusion geometry onto die surfaces
- Export surface data for use in COSTOPTIMIZER® for costing and estimating