

Molds require a great deal of specialized design work in order to produce the various core and cavity components that make up the finished molding surfaces. With the design part as a starting point, the mold designer may be required to:

- scale
- discover parting lines
- draft
- create shut-off surfaces
- create parting surfaces
- subdivide surfaces for side-pull or lifter pieces

VGX™ Core/Cavity (VCC) provides specialized tools to support this specialized type of design work. These tools can significantly reduce cycle time for the mold designer.

## Part Interrogation

VCC includes an advanced Die Lock Check function that identifies and categorizes surfaces as one of:

- sufficiently drafted A-side (cavity)
- insufficiently drafted A-side
- sufficiently drafted B-side (cavity)
- insufficiently drafted B-side
- vertical
- undercut

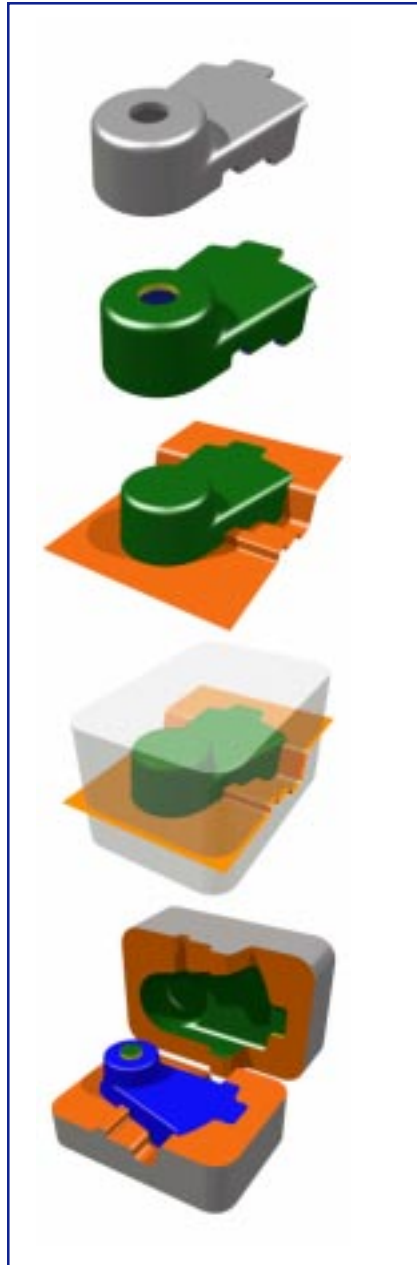
Surface categories are communicated clearly by applying surface colors to each group. Modeling problems are quickly identified. Draft issues are easy to understand. Undercut surfaces are obvious. This tool is tremendously helpful for giving the mold designer a starting point to work on. Multiple pull vectors can be tried to discover the most effective molding strategy. Surface colors can be permanently saved for downstream use.

## Part Modification

VCC conveniently provides the most frequently used modification tools right on its tear-away icon palette:

- scale
- draft
- surface-by-boundary
- silhouette curves

The mold designer often needs one or more of these tools to ensure that the part has a workable parting line and can in fact be molded.



*VGX Core/Cavity provides tools to support the entire process of core/cavity development.*

## Mold Surfaces

Shut-off and parting surfaces are a critical part of the mold design. The underlying NURB geometry can be used to create shut-off surfaces in the interior of the part, providing for smooth and continuous surfaces inside the mold.

VCC also includes a unique surface operator specifically developed to produce parting surfaces quickly and easily. This surface operator is remarkably flexible and interactive, allowing the user to achieve complex results very quickly. Parting surfaces can automatically be generated from the parting line identified by the Die Lock Check. These surfaces can be dynamically manipulated to create complete or partial parting surfaces associated to the part edges.

## Core/Cavity Splitting

The ultimate aim of the mold design is to produce individual models of the core side, cavity side, and any side action or lifter pieces. Once the parting surfaces have been created, VCC automatically divides the insert block into the separate pieces which make up the mold volume. Again, this process is completely associative so that these pieces can each be brought up to date in case of a change to the original design part.

## Online Training

An HTML-based online course is available to quickly teach you the mold design process and the VCC software. You can learn at your own site, at your own pace.

## Prerequisite

Core Master Modeler  
-or-  
I-DEAS® Product Design Package  
-or-  
I-DEAS Artisan™ Package

## For More Information

For more information, contact your local SDRC representative or call 1-800-848-7372.