

# Design Tools for Complex Mold and Die Design

## Data Import

- Native SolidWorks models
- Imported:
  - solid models
  - surface models

## Part Properties

- Global dimensions
- Volume, mass, surface area

## Draft Angle Analysis

- User-defined pull direction
- User-defined draft angle
- Detection of undercuts and vertical areas
- Automatic undercut elimination

## Dynamic Animation

- One direction mold opening
- Multidirectional mold opening
- Unassigned faces
- Slide bar control

## Shut-offs

- Telescopic openings
- Complex openings
- 2D planar surface
- 3D complex surface

## Parting Line

- Automatic parting line generation
- Grouping of inside and outside parting lines
- Parting line editing
- Manual parting line generation

## Parting Surface

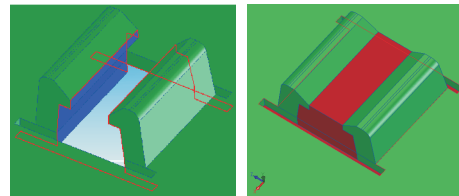
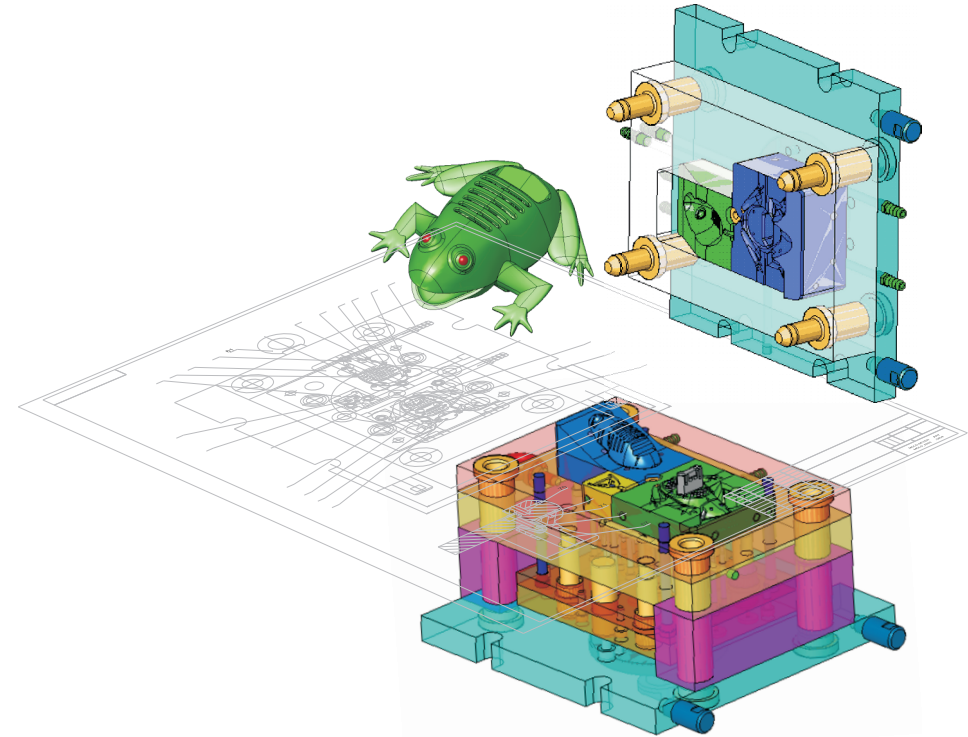
- Automatic surface generation
  - 2.5D extrusion with direction control
  - 2.5D extrusion in two directions
  - 3D radiate
- Manual stepwise surface generation
  - 2.5D extrusion with direction control
  - 2.5D extrusion in two directions
  - 3D radiate
  - Sweep
- Control of sharp angle shut-offs
- Compare different parting surfaces

## Core/Cavity

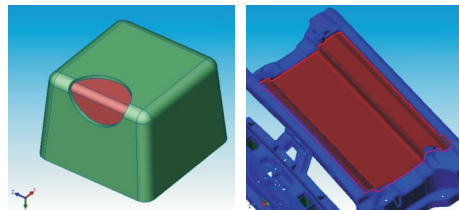
- Automatic skin generation
- Skin validity check of forming
- Forming Plate Form
  - rectangular
  - cylindrical
- Automatic creation of associative core/cavity relations
- Updating the core and solid cavity model changes
- Exploded view of mold assembly

# FACEWORKS

## Mold and Die Design



Telescopic openings



Complex openings

Capvidia NV Headquarters  
Technologielaan 3  
B-3001 Leuven, BELGIUM

Phone: +32 (16) 40 27 47  
E-mail: [info@capvidia.be](mailto:info@capvidia.be)  
[www.capvidia.com](http://www.capvidia.com)

Capvidia NA LLC  
Mobile: 507 276 2379  
Phone: 507 794 5447  
E-mail: [sales@capvidia.com](mailto:sales@capvidia.com)

Capvidia GmbH  
Phone: +49 2131-1780145  
Email: [tt@capvidia.com](mailto:tt@capvidia.com)

FaceWorks provides powerful design tools that automate and simplify the most complex mold design in SolidWorks. It was specifically developed and tested with continuous input from mold designers and manufacturers. Users benefit from standard SolidWorks functions complemented with specialized, easy-to-use tools that simplify the tool-making process dramatically and minimize costs and manufacturing times.

FaceWorks combines solid and surface modeling techniques and provides optimal tools for mold designers. The advanced modeling tools include: creation of cavities, cores, sliders, lifters, and sub-inserts using 3D-solid modeling techniques and associative operations. FaceWorks performs the parting process on solids or skins (set of surfaces that do not form a solid).



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# FaceWorks Workflow

