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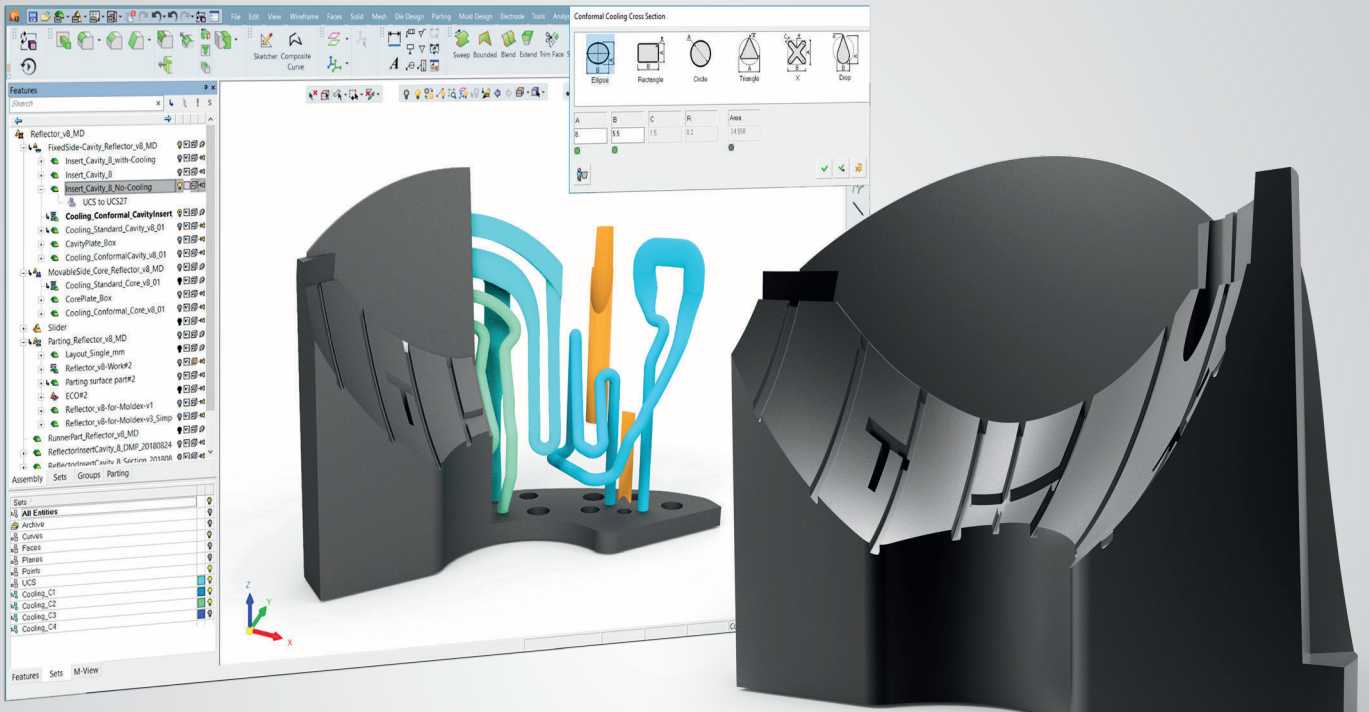


Conformal Cooling

Conformal cooling technologies reduce injection cycle times and improve quality by enabling the creation of cooling channels that follow the contours of components for more efficient heat removal.

Part of Sandvik Group

SIMTEK
Real Time. Real Results

Cimatron Conformal Cooling

Cooling is a critical process for plastic injection molds that affects cycle time and final part quality.

When it comes to building complex molds, traditional machining methods cannot always produce optimized conformal cooling channels, which can lead to longer cycle times, warpage, and sink marks on final parts. Additive manufacturing helps solve this challenge by enabling the production of mold components with conformal cooling channels for faster cycle times, better part quality, and more efficient cooling.
Cimatron's end-to-end solution for conformal cooling design and production enables mold makers to detect areas that would benefit from conformal cooling channels and design the mold with a combination of conventional and conformal cooling channels.

Design and simulation

- Design molds using Cimatron's dedicated toolset for mold designers and tooling manufacturers.
- Easily include conformal cooling channels with fast, automated tools that save hours of design work.
- Validate the cooling efficiency, part quality, and cycle time of designs using filling simulation.

Printing preparation

- Prepare mold components for 3D printing and post-processing.
- Define optimized laser and printing strategies.
- Simulate the 3D printing process to ensure an accuracy.

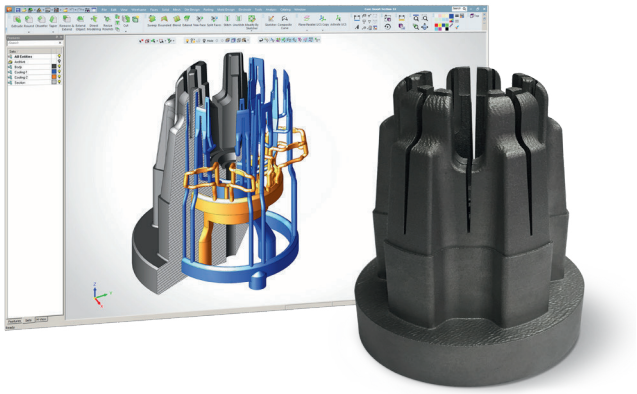
Printing

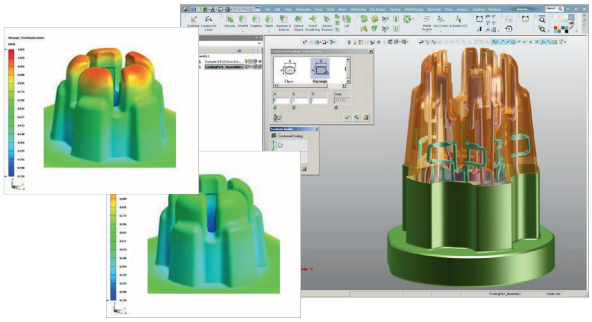
- Achieve high-quality, long-lasting mold components that benefit from the ability to print internal cooling channels without the need for support structures.

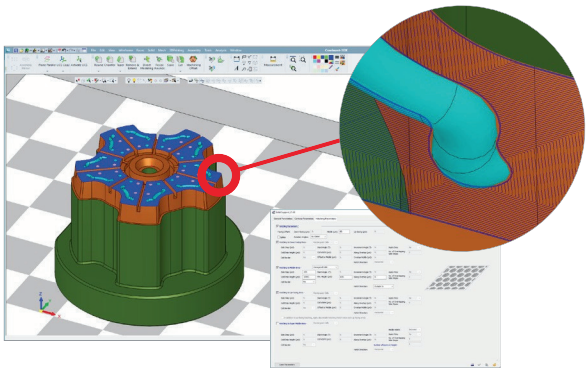
Post-Processing

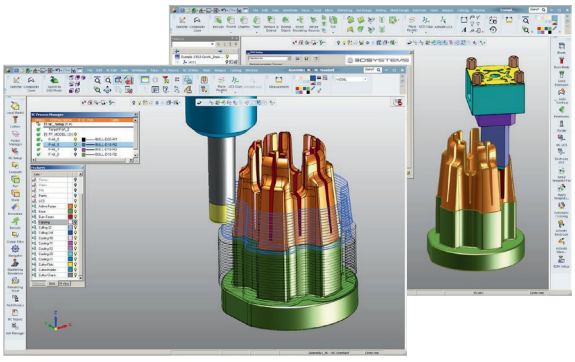
- Perform accurate, high-quality drilling and milling operations on printed components.
- Design fixtures and gages that reflect printed geometry to mount printed components.
- Achieve fine, accurate details with Cimatron's electrode design and manufacturing tools.

Cimatron's comprehensive workflow for conformal cooling design reduces cycle time and improves part quality.









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