PRODUCT BRIEF

Flow™ Software

Process Aware, Simulation Driven Print Preparation Software

Flow ensures predictable print outcomes while reducing preparation time. Driven by an integrated simulator and co-developed with Sapphire®, Flow enables parts not previously possible with Additive Manufacturing (AM).

Flow eliminates the frustration of print preparation

A faster workflow that preserves the designer's intent.

Fewer print errors and a streamlined, simplified user experience.

Manufacture Any Design - Deliver On AM's Biggest Promise

Flow enables SupportFree for metal; VELO3D's unique ability to print low angles, large diameters and inner diameters without supports. It overcomes historical limitations so engineers are free to innovate and accelerate product performance.

Deliver Predictable Print Outcomes

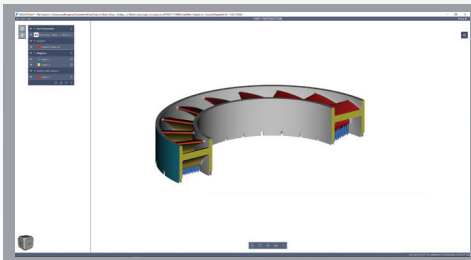
An integrated simulation engine predicts print outcome and applies print deformation correction to the part, assuring that the part will print exactly as designed the first time and every time in production.

Accelerate Print Preparation with Flow Native CAD Workflow

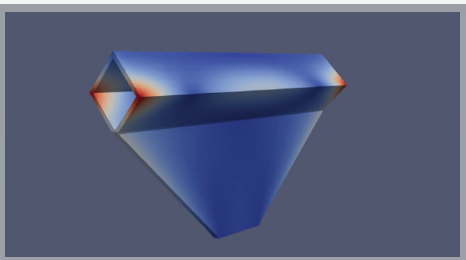
Flow native CAD workflow helps engineers preserve the design intent. It makes metal 3D printing more accessible by integrating smart tools that help users with orientation strategy, support generation, print simulation, per-surface process application, and process review.

Print True to Design

Flow is the first and only print preparation software that delivers a print outcome based on the designer's intent. With native CAD workflow, users seamlessly translate the original design into print instructions. Users can optimize for target cost and quality parameters by surface.



Native CAD



Simulation

Composer

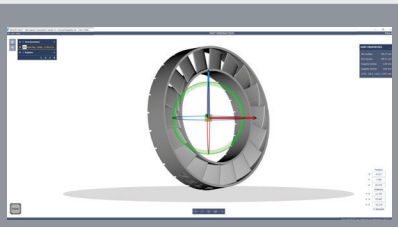
Contact Velo3D Sales Engineers for more details or to schedule a tour and demo: info@velo3D.com

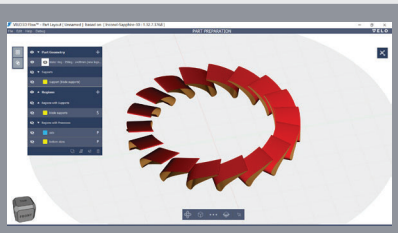
Native CAD Print Preparation

The simple, intuitive Flow UI provides unprecedented ease of use. By retaining CAD's capabilities, it makes cumbersome processes fast and easy. Flow also supports workflows with topologically-optimized and generatively-designed parts.

Native CAD

Native CAD workflow eliminates the need for translation to labor-intensive STL mesh file formats that require healing and fixing for AM.



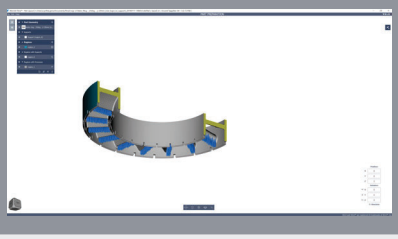


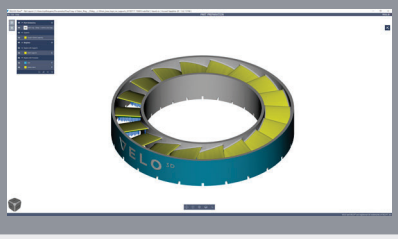
Smart Selection

Smart Selection uses CAD logic to reduce laborious selection processes down to single clicks. Selection refinement through height & angle filters allows targeted selection.

Supports

Regions (saved selection sets) make the application of supports and processes easy and organized. Flow features beam, wall, thin wall, and tree support types.



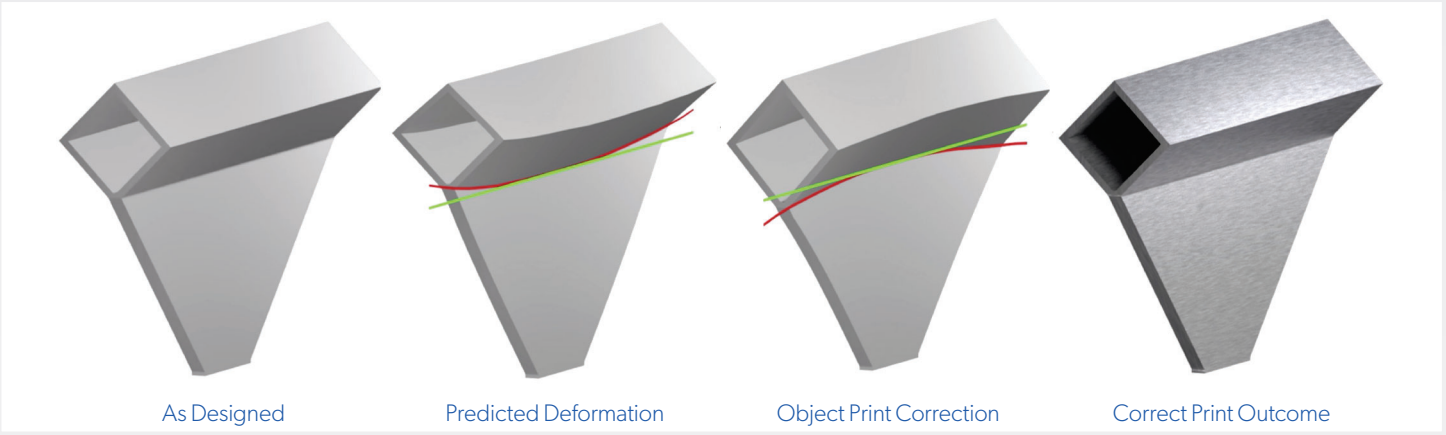


Process

Per-surface process overrides give engineers greater control over part features. VELO^{3D} processes are optimized for speed, feature geometries, and material properties.

Simulation Engine

Process-aware simulation in Flow can correct for build deformation and post-processing issues before the build even begins, leading to typical first-print success of 90 percent.



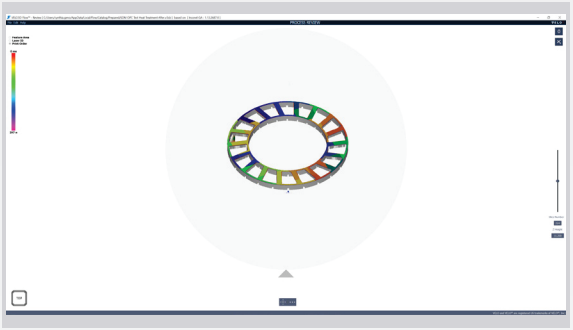
As Designed | Predicted Deformation | Object Print Correction | Correct Print Outcome

The simulation engine analyzes the design, predicts deformation in the print, and applies a counter-deformation to the part, so the part comes out right the first time and every time. It also predicts part risks and failures, validating the execution feasibility of the print prior to starting the build process.

Composer

Flow has a sophisticated composer that detects geometric features and applies an optimized process to those features, delivering predictable print outcomes. Unlike other slicing software, geometric feature detection uses information from previous layers to define print strategy for the next layer.

Flow Process Review lets you review the applied processes, laser assignment, and print order in 3D or 2D slices, prior to printing, assuring that the printer does what you specified.



Headquarters
511 Division Street
Campbell CA 95008

To learn more visit:
www.velo3d.com
info@velo3d.com

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