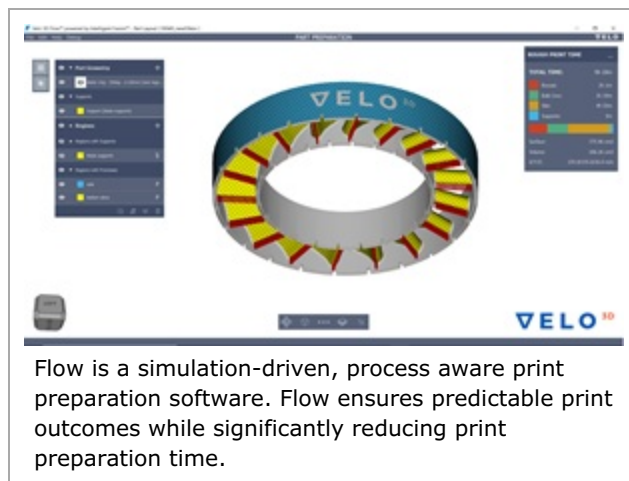


February 19, 2019



VELO3D Introduces Enhancements to Its Flow Software to Accelerate Metal 3D Printing in Production

CAMPBELL, Calif., Feb. 19, 2019 (GLOBE NEWSWIRE) -- [VELO^{3D}](#)[™], a groundbreaking 3D printer manufacturer, today announced advances to its print preparation software, Flow[™]. Driven by a powerful integrated simulation engine, Flow ensures predictable print outcomes, while its native CAD workflow controls performance consistent with the design intent and significantly reduces print preparation time. Working in concert with VELO^{3D}'s Sapphire[™] system Flow enables next generation SupportFree[™] additive manufacturing for parts previously not possible.



Flow is specifically designed for Sapphire, VELO^{3D}'s laser fusion metal additive manufacturing system. It includes tools that help with part orientation, support generation, simulated print predictions, per-surface process application, slice composer and process review. As a result, manufacturers can now print complex part geometries SupportFree, enabling volume manufacturing of parts that are otherwise impossible or uneconomical to print due to hard-to-remove support structures.

"Flow takes a refreshing new look at additive software: its ease of use is unprecedented. Understanding how users work and offering just in time tools is an exciting direction taken by VELO^{3D}," said Scott Volk, CTO of Incodema3D. "VELO^{3D}'s advanced simulation, prediction and correction ensures not only print success, but improved part to part quality accelerating the adoption of volume production."

Manufacturing Any Design

VELO^{3D}'s unique ability to print low angles and overhangs below five degrees, as well as large inner diameters and tubes up to 40mm without the need for supports, eliminates the need for difficult and laborious post-processing cleanup. This capability breaks the limiting boundary of other systems that require supports for most angles below 45 degrees, constraining design freedom and limiting the number of designs that can be produced with additive technology.

Delivering predictable print outcomes

Flow key features include:

- A new physics-driven simulation engine has been built from the ground up, optimized for VELO^{3D} process capabilities and the Sapphire system. It contributes to achieving a first print success rate of up to 90 percent, preventing many failed iterations.
- The powerful simulation utility predicts the print outcome, applying print deformation correction and validating the execution feasibility of the print prior to starting the build process. It ensures that the print outcome results in dimensionally accurate design intent.
- A sophisticated composer detects geometric features and applies the optimized, proven print process to specific features, delivering predictable print outcomes.

Accelerating Print Preparation with Flow's native CAD workflow

The integration of print preparation, simulation and composing capabilities into a single software eliminates historic incompatibilities, significantly simplifying the workflow. Native CAD workflow enables new user experience with smart selection, refinement, and filtering of part features and reduces hundreds of manual steps to a few clicks. This enables users to focus their efforts on solving problems on the application level instead of troubleshooting machine level parameters.

Best print outcome based on design intent

Flow is the first and only print preparation software that manages print outcome based on the design intent. With the native CAD import, the design intent is preserved, and users can optimize for target cost and quality parameters by surface. It enables selection of areas to optimize the surface finish, and others for throughput. Flow allows the user to optimize a print within the design requirements by delivering the highest possible quality for critical surfaces, while non-critical surfaces can be optimized for throughput.

"Build preparation software has always been an afterthought," said Benny Buller, CEO of VELO^{3D}. "VELO^{3D}'s strategy is to offer an integrated hardware, software and process solution. The system is process driven, where the software manages the hardware and can predict and control the outcome. It is the only way to fulfill our mission to manufacture any design, assure accuracy and consistency and thus take additive manufacturing mainstream."

About VELO^{3D}

VELO^{3D} provides industry changing capabilities that enable broad adoption of 3D printing for manufacturing. The VELO^{3D} metal additive solution is comprised of the Sapphire production

system that works in concert with the Flow print preparation software. Leading manufacturers use VELO^{3D} technology to produce applications previously considered impossible to manufacture. Learn how VELO^{3D} can boost your product performance, radically speed up your development or significantly reduce your product cost.

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/259de504-1012-44a3-84d0-9cd3404a7539>

A video accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/d3050de2-6cc2-4448-b724-4b826c143d0a>

Media Contact:
Susan Lehman
susan.lehman@velo3d.com

Source: Velo3D, Inc.