

PRODUCT BRIEF

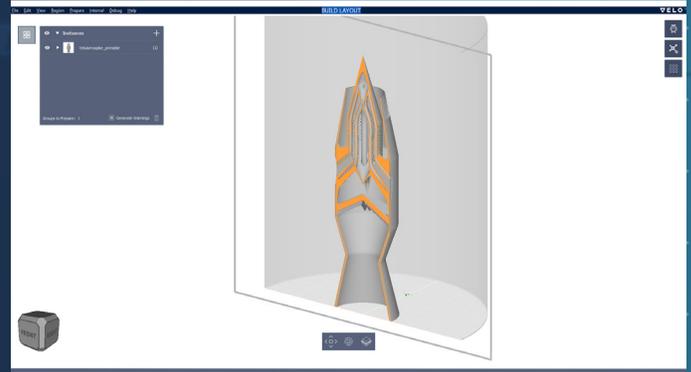
Flow Software

To Learn More Visit
velo3d.com
info@velo3d.com

Headquarters
 511 Division Street
 Campbell, CA 95008

European Technology Center
 Am Technologiezentrum 5
 86159 Augsburg, Germany

Flow print preparation software is responsible for prescribing the manufacturing process for the Sapphire family of metal 3D printers. The software’s feature-based process library eliminates the need to develop new part-specific parameters sets—saving months of development time and reducing the need for specialized technicians. With more than two dozen standardized recipes, engineers can analyze the part while Flow automatically applies the right recipe to each feature.



Co-Developed with the Sapphire Family of Printers

Flow’s seamless integration with Sapphire printers results in pre-validated build instructions. Because Flow leverages Velo3D’s standardized process library, the resulting .veloprint file can be used to manufacture parts with consistent geometric accuracy, surface finish, and material properties from any Sapphire printer worldwide. Flow supports Velo3D’s entire line of printers including the Sapphire, Sapphire 1MZ, and the Sapphire XC. This allows for even greater scalable production, with up to eight laser sequences covering Sapphire XC’s 600mm diameter build plate.

User Friendly Interface

Flow’s simple and intuitive interface lets you do more in fewer steps. Intuitively interact with part geometry using CAD-derived surface segmentation and reduce laborious selection and filtering processes down to a single click. Flow also lets you quickly override print instructions and add supports by targeting surfaces through height and angle filters.

The Velo3D Manufacturing Process

Prescribed by Flow, Executed by Sapphire, Validated by Assure.



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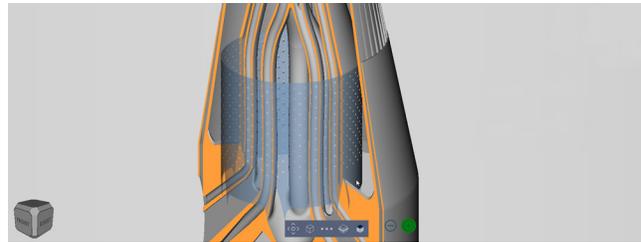
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Flow Capabilities

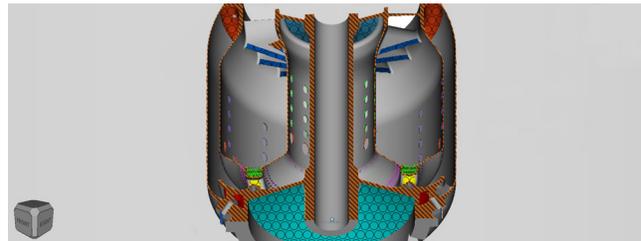
Native CAD Support for a Simpler Workflow

With Flow, you can easily import native CAD models without converting them to labor-intensive STL mesh file formats. This creates greater process control and reduces the variability between operators, leading to more consistent outcomes. Furthermore, if engineers make changes to the original CAD, Flow users can easily revise the Flow model without having to re-do the support layout.



Fully Optimized Library of Feature-Based Processes

Flow makes it simple to print the most advanced geometries and achieve validated material properties for parts by pulling from an optimized library of feature-based recipes and automatically applying them as needed.



Intelligent Slicing

Flow lets you print your part immediately without the need for specialized technicians or previous additive manufacturing experience. Once a layout is complete, Flow intelligently analyzes the plan and prepares the part for print.



Creating a Golden Print File

Flow enables unprecedented scalability and repeatability with its unique Golden Print File. The file can be used to manufacture identical parts from any Sapphire in the world with consistent material properties and accurate feature resolution. This is achieved by leveraging Velo3D's standardized library of feature-based processes and automated calibration routines to create the same material properties for the entire fleet.



Inspector

No matter how you slice it, Flow's Inspector gives you a deep understanding of the process before a print starts. This provides a powerful tool to review laser sequencing and recipe assignment, which helps eliminate possible anomalies and diagnose post-build issues.

