PRODUCT BRIEF

# Flow Software

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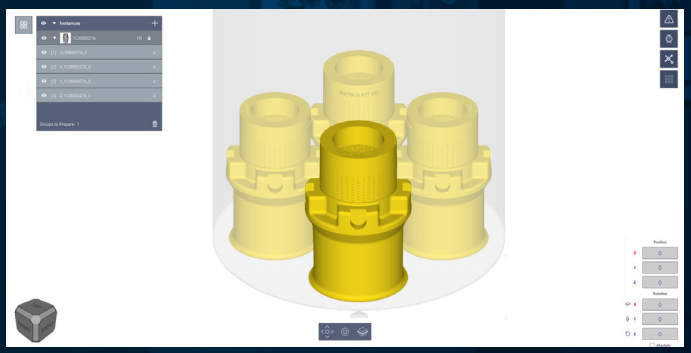
Flow print preparation software is responsible for prescribing the manufacturing process for the Sapphire family of metal 3D printers. The software's controlled parameters eliminate the need to develop new part-specific parameters sets—saving months of development time and reducing the need for specialized technicians.

With Flow, engineers can analyze their parts and apply the right solution for each feature. Flow now includes user-selectable core parameter sets that provide enhanced control over builds with the ability to assign different core instructions to parts within the same build. This, in addition to Flow's ability to apply skin and contour overrides, gives customers enhanced control over the final material properties of printed parts.



## Co-Developed with the Sapphire Family of Printers

Flow's seamless integration with Sapphire printers results in pre-validated build instructions. These conformal instructions, combined with Sapphire's automated calibration routines, mean that exported "Golden" print files (*.veloPrint) 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, Sapphire XC, and the Sapphire XC 1MZ. This allows for even greater scalable production, with up to eight lasers covering Sapphire XC's 600 mm diameter build plate.

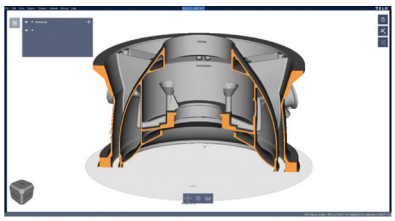
## User-Friendly Interface

Flow's 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 few clicks. Flow also enables easy manipulation of the part file to support, orient, lay out on the build plate, and add text to the part for labels and serial numbers.

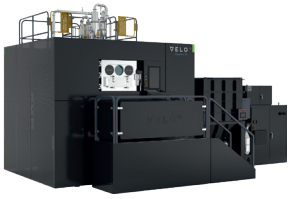
Flow also lets users know potential risks associated with their print. Answering the question "Can I Print It?" with checks and messages that prevent errors before a build starts.

# The Velo3D Manufacturing Process

Prescribed by Flow, Executed by Sapphire, Validated by Assure



**Flow**
Print Preparation Software



**Sapphire**
Metal AM Family of Printers

**Assure**
Quality Validation

UNDERLYING INTELLIGENT FUSION MANUFACTURING PROCESS

**To Learn More Visit**
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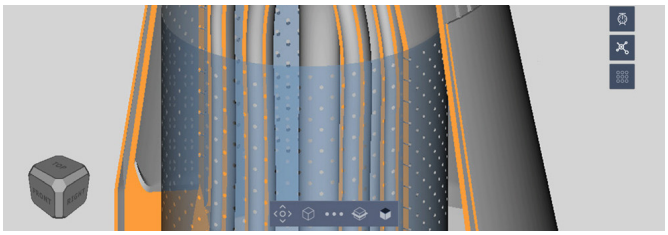
# Flow Capabilities

### 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 leads to more consistent outcomes. Flow also enables easy manipulation of the part file to support, orient, lay out, and add labels and serial numbers to the part.

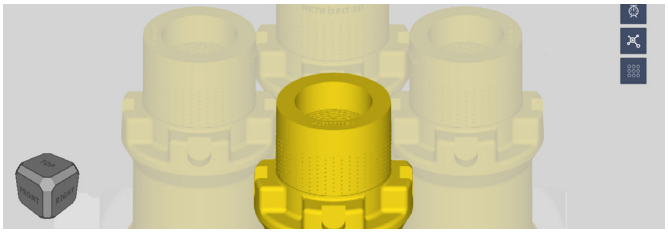

### Controlled Parameters for Consistent Properties

With its preloaded controlled parameter sets, Flow enables users to accurately print many of the most aggressive engineering designs without the need for feature-based parameter development. Flow provides greater control and helps users achieve their target material properties by assigning different core instructions to parts within the same build.



### Faster Processing for Multi-Part Prints

Flow enables a faster method to calculate build times for builds of different part quantity. After a part has been prepared for print, users can vary the quantity of that part and see updated build times to better understand the economics of scaled production.



### Create a Velo3D "Golden" Print File

Leverage a digital inventory where qualified parts have a persistent, unmodifiable, secure, digital print file (or "Golden" print file) that can be transmitted to a Velo3D-enabled global print facility and recreated to match original specifications.

### 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 parameter assignment. See exactly how Flow's parameter sets are being applied to your part with detailed information on parameters and laser sequencing.