VELO³ᴰ

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PRODUCT BRIEF

Flow Software

Flow pre-print software simplifies the metal AM workflow with a comprehensive solution to layout your build, customize parameters, simulate thermomechanical behavior of the print, and conduct detailed inspections of print instructions. With direct import of native CAD, Flow also eliminates many of the issues associated with STL conversion. Users can determine the optimal process for applications by transferring existing parameter sets or creating new ones with Flow Developer and, through our partnership with PanOptimization, quickly highlight issues related to temperature, stress, and distortion.

Co-Developed with the Sapphire Family of Printers

Flow seamlessly integrates with Sapphire printers, facilitating automated calibration routines that enable the use of exported "Golden" print files (*.veloPrint) for scalable part manufacturing. This process guarantees consistent geometric accuracy, surface finish, and material properties across all Sapphire printers 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

Our fully integrated manufacturing solution is comprised of software, hardware and an intelligent underlying manufacturing process allowing engineers to build and scale mission-critical parts.

FLOW
Print Preparation Software

SAPPHIRE
Metal AM Family of Printers

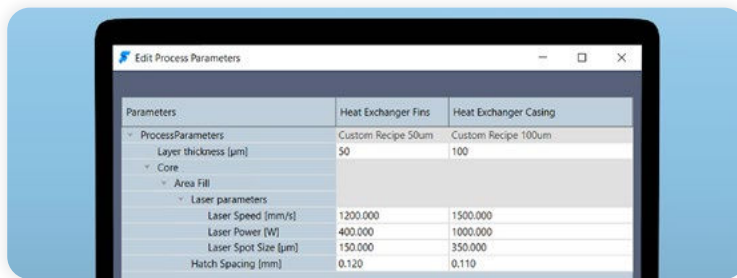**ASSURE**
Quality Validation

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.
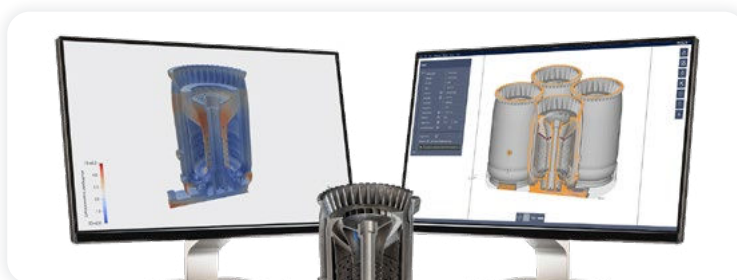

Transfer Your Knowledge and Achieve Scale

Flow Developer, an optional feature of Flow, enables engineers to determine the optimal process for their application by unlocking the ability to transfer or create their own parameter sets into Flow. This eliminates the need to restart projects, granting access to Sapphire printers' control, quality, and repeatability allowing engineers to achieve their program goals.

Flow PanX Integration for First Print Success

Velo3D's integration with PanOptimization takes the guess work out of metal AM by simulating the thermomechanical behavior of the printed part. Quickly highlight issues related to temperature, stress, and distortion for parts of any printable size.

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 Before You Print

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.