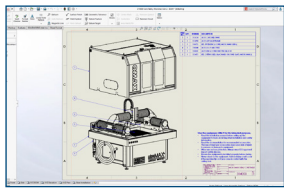**DS SOLIDWORKS**

3DEXPERIENCE®

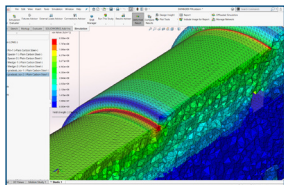# WHAT'S NEW IN SOLIDWORKS 2020—DESIGN TO MANUFACTURING

1

Large Assembly Drawing for Faster Design

- Detailing Mode: Open drawings in a matter of seconds while maintaining the ability to add and edit annotations.
- Graphics Acceleration for Drawings: Improve frame rates when panning and zooming within drawings with hardware-accelerated rendering.

Benefits

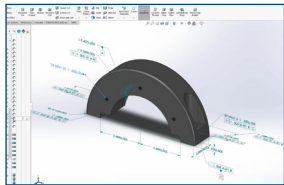Work faster on drawings with many sheets, configurations, and resource-intensive views.

2

Faster Calculations and Improved Accuracy for Simulation

- Speed and Accuracy: Speed up analysis and improve accuracy by combining linear and quadratic elements in the same simulation study.
- Distributed Coupling: Allow faces attached to Pin and Bolt connectors to deform.
- Beam Models: Import temperatures to perform a stress analysis after running a thermal analysis on a model with beams.

Benefits

Run faster calculations and better simulation of real-world behavior.

3

More Functionality in SOLIDWORKS MBD

- Datum Targets and Helical Insert Thread Callouts: Provide richer product definition by defining semantic datum target dimensions and helical insert thread callouts.
- Annotation Organization: Easily locate and sort annotations for assemblies and parts using subfolders under the Annotations folder in the FeatureManager® design tree.

Benefits

Communicate design requirements directly in 3D and drive downstream manufacturing automation.
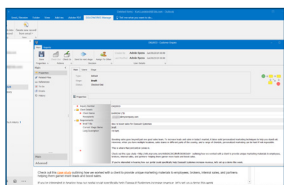

4

Improvements to SOLIDWORKS Visualize

- XR Exporter: Easily convert your Visualize files to AR/VR experiences.
- PDM Integration: Manage your files more easily with SOLIDWORKS® PDM integration.
- Light Profiles: Work with IES Light Profiles and newly customizable MDL materials.

Benefits

Enhance flexibility with support of new file formats and customizable materials and lighting.
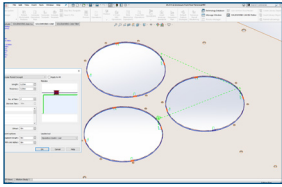

5

SOLIDWORKS PDM and SOLIDWORKS Manage for Working Faster

- Enhanced SOLIDWORKS PDM Browsing: Avoid waiting for all data to be loaded before you continue to browse in the PDM Vault, with asynchronous loading of file data.
- Enhanced Search User Interface: Perform faster searches by combining multiple search operands.
- SOLIDWORKS Manage Outlook Integration: Save emails directly into a SOLIDWORKS Manage record and create new records, e.g. cases, from the data in a message.

Benefits

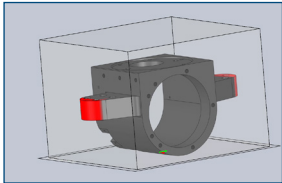Manage your product data more efficiently and easily.

DS DASSAULT SYSTEMES

6 Improved Manufacturing Workflows with SOLIDWORKS CAM

- CNC Probing: Use a probe tool to speed up setup and your manufacturing processes.
- Automatic Tab Generation for Small Profiles: Create multiple tabs or micro-joints in parts needed for multiple fabrication workflows.
- Tapered Multipoint Thread Tools: Enhance your threading options with a multipoint tapered threading tool available in the library.

Benefits

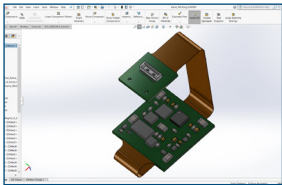**Support improved manufacturing workflows that save time and reduce errors with new CAM features.**

7 Simplified 3D Printing

- 3D Printer Library: Access an extensive list of commercially available 3D printer volumes.
- Create Slices from SOLIDWORKS Geometry: Generate slices from precise SOLIDWORKS geometry to export to a 3D manufacturing format (.3MF) file without first having to save the geometry to a mesh file.

Benefits

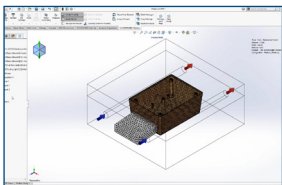**Save time, improve accuracy, and simplify 3D printing tasks.**

8 SOLIDWORKS Electrical and PCB Enhancements for Mechatronics Design

- Rigid-Flex Design: Enable single-board rigid-flex PCB design with the ability to define rigid-flex regions, layers, and stack thicknesses with SOLIDWORKS PCB or SOLIDWORKS 3D CAD.
- Flattening Routes: Speed up the flattening of electrical cables and harness designs with enhancements in SOLIDWORKS Electrical.
- Wire Mass Properties: Calculate mass properties for wires, cables, and harnesses with SOLIDWORKS Electrical.

Benefits

Meet critical project schedules and design goals while reducing design and manufacturing costs.

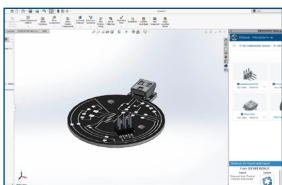## 9 Improved Workflows for SOLIDWORKS Plastics

- Mesh Property Manager: Reduce the number of steps to create a mesh.
- Warpage: Export a deformed shape as a SOLIDWORKS part after running a warpage analysis.
- Materials Library: Access the plastic materials library expanded with an online database for plastic materials.

Benefits

Design and manage plastics products more easily.

10 Connected Design-to-Manufacturing Ecosystem in the Cloud

- Direct Connection: Easily connect SOLIDWORKS 2020 with key tools through the cloud-based **3D**EXPERIENCE® platform.
- Data Sharing and Collaboration: Share models back and forth between SOLIDWORKS and **3D**EXPERIENCE tools. Collaborate in real time from anywhere and on any device.
- Extended Workflows: Easily extend your design ecosystem with new capabilities such as subdivisional modeling, conceptual design, and product lifecycle and project management in the cloud.

Benefits

Enable seamless product development workflows and easily extend them with new tools as your business needs evolve.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3D**EXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.

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