

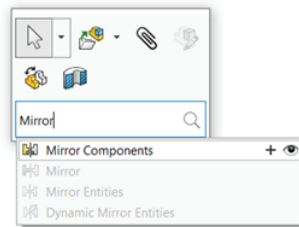
# WHAT'S NEW IN SOLIDWORKS 2022

## HAWK RIDGE SYSTEMS' FAVORITE FEATURES

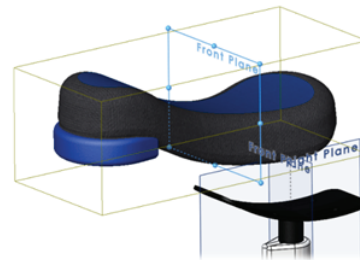
Every new release brings hundreds of new features to the SOLIDWORKS product family, and 2022 is no exception. Here, we present our Top 10 favorite enhancements and features for the year, each tailor-made to provide unparalleled ease and efficiency for your design-to-manufacturing workflow.

### FEATURE 1: USER INTERFACE ENHANCEMENTS FOR PARTS/ASSEMBLIES

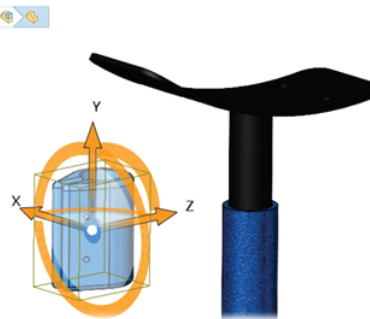
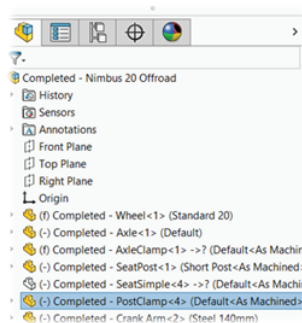
New user interface enhancements for both parts and assemblies make life easier for everyone, no matter how you use SOLIDWORKS 2022. Command search functionality has been built into the S-key shortcut menu, along with the ability to display the default planes of a component by hovering over it and pressing Q, making them significantly easier to access for sketching or mating. Additionally, the movement triad appears automatically when selecting an assembly component in the Design Tree for even easier positioning:



Command search with S key



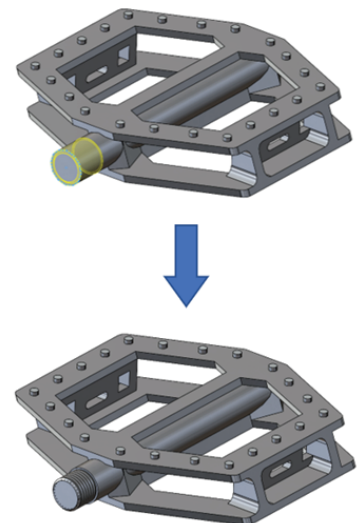
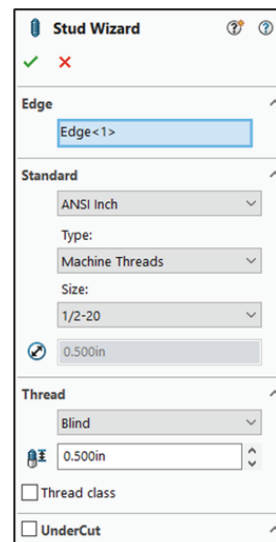
Display default planes with Q key



Display movement triad by selecting component in Design Tree

### FEATURE 2: STUD WIZARD

The brand-new Stud Wizard feature allows users to rapidly place and define externally threaded studs in parts much like the familiar Hole Wizard command while balancing performance and design detail. Two unique modes allow for the creation of thread on existing cylinder features, or studs can be placed and built from scratch. Use the familiar user interface to define the stud location, standard, and depth, then watch as SOLIDWORKS does the heavy lifting for you! The result is a lightweight thread feature with annotations for manufacturing that more accurately represent true geometry than typical cosmetic threads:

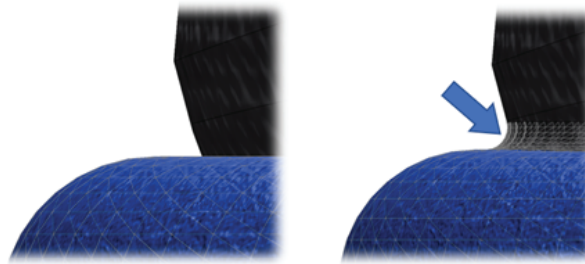


### FEATURE 3: HYBRID MESH MODELING

Improvements to the Parasolid modeling kernel have resulted in a brand-new strategy for users of mesh files known as Hybrid Mesh Modeling. In SOLIDWORKS 2022, mesh bodies can now be combined directly with traditional SOLIDWORKS bodies without limiting downstream features to Boolean operations. Blending operations between body types are now supported and result in faceted mesh faces, while traditional features such as bosses/cuts result in true SOLIDWORKS faces that can be used as references or even sketched on, making Hybrid Mesh Modeling a big win for regular mesh users:



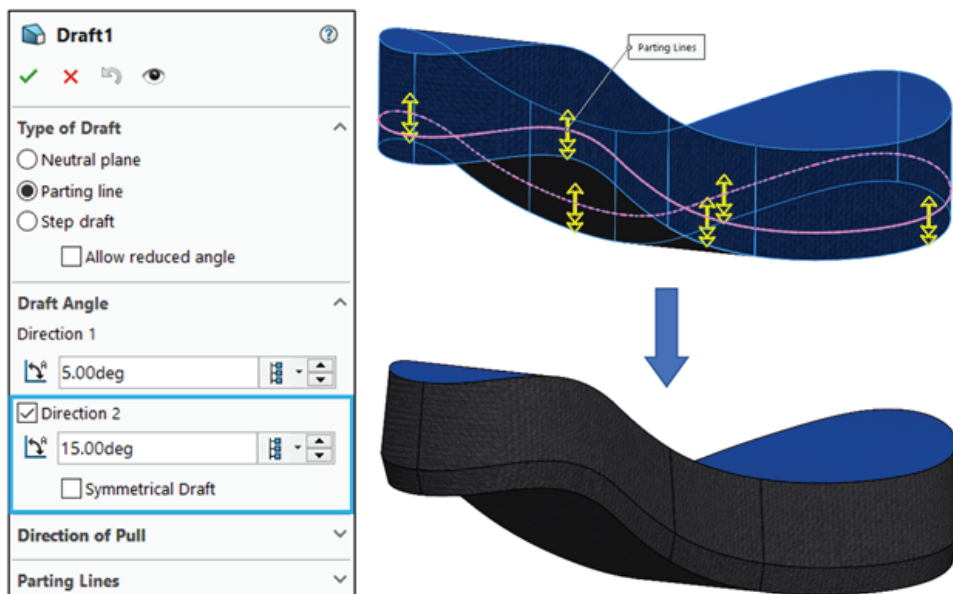
Mesh body combined with traditional SOLIDWORKS body; Extruded Cuts added



Fillet added between mesh body and SOLIDWORKS body

### FEATURE 4: DRAFT ACROSS PARTING LINES

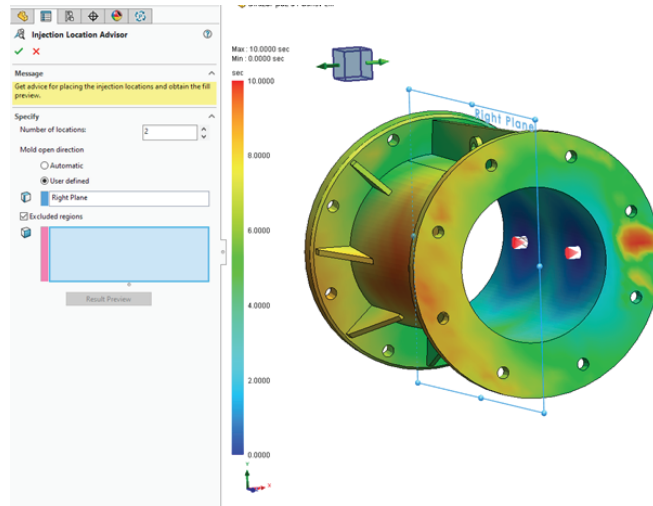
Draft is often required in two directions when preparing a part for plastic injection molding or similar manufacturing operations. Previously, Parting Line Draft could only be constructed in a single direction at once, requiring the creation and management of multiple features for proper design. SOLIDWORKS 2022 introduces the Direction 2 option for Parting Line Draft, simplifying your Design Tree and subsequent editing operations by combining multiple Draft features into one. A Symmetrical Draft option is available to maintain equal draft in both directions:



## FEATURE 5: AUTOMATIC GATE LOCATIONS IN SOLIDWORKS PLASTICS

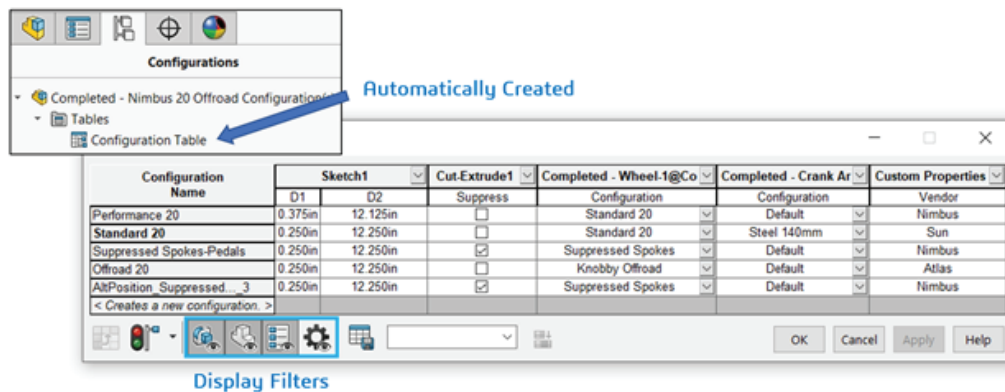
SOLIDWORKS Plastics has always been the fastest way to simulate the injection molding process and optimize the design and mold setup of a plastic part. Now in SOLIDWORKS 2022, this process is even more streamlined with the Injection Location Advisor tool.

Before running your Fill Analysis, simply open the Injection Location Advisor, specify a mold open direction and the number of gates you want- Plastics will automatically determine the best gate location for minimizing fill time and pressure, along with a preview of the filling pattern and potential weld lines:



## FEATURE 6: AUTOMATIC CREATION OF CONFIGURATION TABLES FOR PARTS/ASSEMBLIES

While configuration tables have been available in SOLIDWORKS for many years, creating these tables has always been rather tedious. New in SOLIDWORKS 2022, a default configuration table is automatically generated as sketches, features, components, or other aspects of a part/assembly are configured, making easier than ever before to track the differences between configurations and make adjustments as required. Additionally, new filters in the configuration table user interface allow you to adjust the table view and focus on just the configuration elements you're most interested in:



## FEATURE 7: LINKAGE ROD CONNECTOR IN SOLIDWORKS SIMULATION

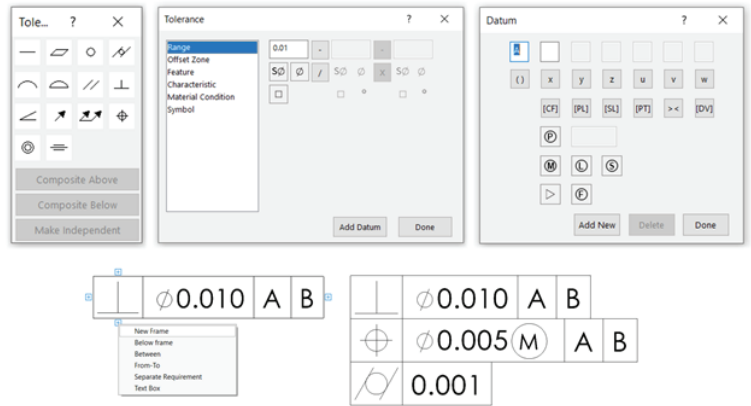
Connectors are one of the best ways to speed up a stress analysis in SOLIDWORKS Simulation, mimicking the behavior of common components such as pins, springs, and bolts without added meshing.

Now in SOLIDWORKS 2022, your mechanical assemblies can take advantage of the new Linkage Rod Connector in the same way- simply define the attachment points of the assembly, the joint types (pivot, rigid or hinge), and section properties- loads and deformation will be propagated through the Linkage Rod as if it had been modeled as a solid part:



## FEATURE 8: GUIDED GD&T ANNOTATIONS

The user interface for GD&T creation has received an overhaul this year, making it exceptionally easy to create and place feature control frames. Begin by selecting a characteristic symbol, then use the simple categorized interface to define the range, material condition, and any other required attributes. The Add Datum button can be used to quickly apply primary, secondary, and tertiary datum references as needed. The feature control frame is updated on-screen as adjustments are made, and additional frames can easily be added using the available + buttons:



## FEATURE 9: SHADOW CATCHER PROPERTY IN SOLIDWORKS VISUALIZE

When you need to create photo-realistic images of your 3D models, SOLIDWORKS Visualize has been an industry leader for several years- to the point that many customers use rendered images to replace physical photographs of their commercial products.

While realistic lighting and shadows on your 3D geometry have long been a strength of Visualize, they haven't always extended to background images. This is addressed in 2022 with the new Shadow Catcher Property, which extends shadows onto 2D images such as floors, walls, or other scenery:



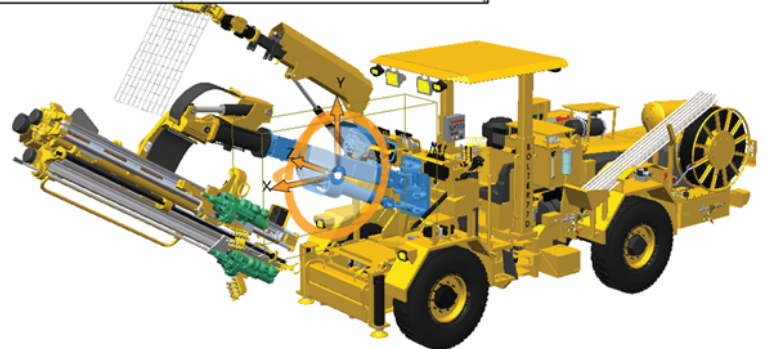
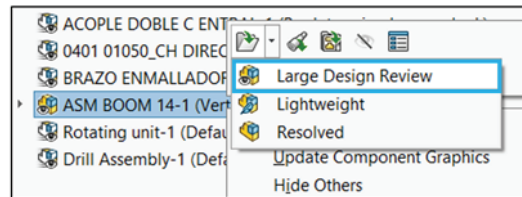
Shadow Catcher Off



Shadow Catcher On

## FEATURE 10: OPENING SUBASSEMBLIES IN LARGE DESIGN REVIEW

Everyone who has taken advantage of Large Design Review capability in SOLIDWORKS knows the world of difference it makes in being able to quickly open and review top-level designs. Now in SOLIDWORKS 2022, you can open sub-assemblies directly from the context menu of a top-level assembly while staying in Large Design Review mode, allowing you to measure, mate, and manipulate all levels of your design while maintaining a massive performance boost:



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