# SOLIDWORKS MBD
ENABLE DRAWINGLESS OPERATIONS WITH MODEL-BASED DESIGN
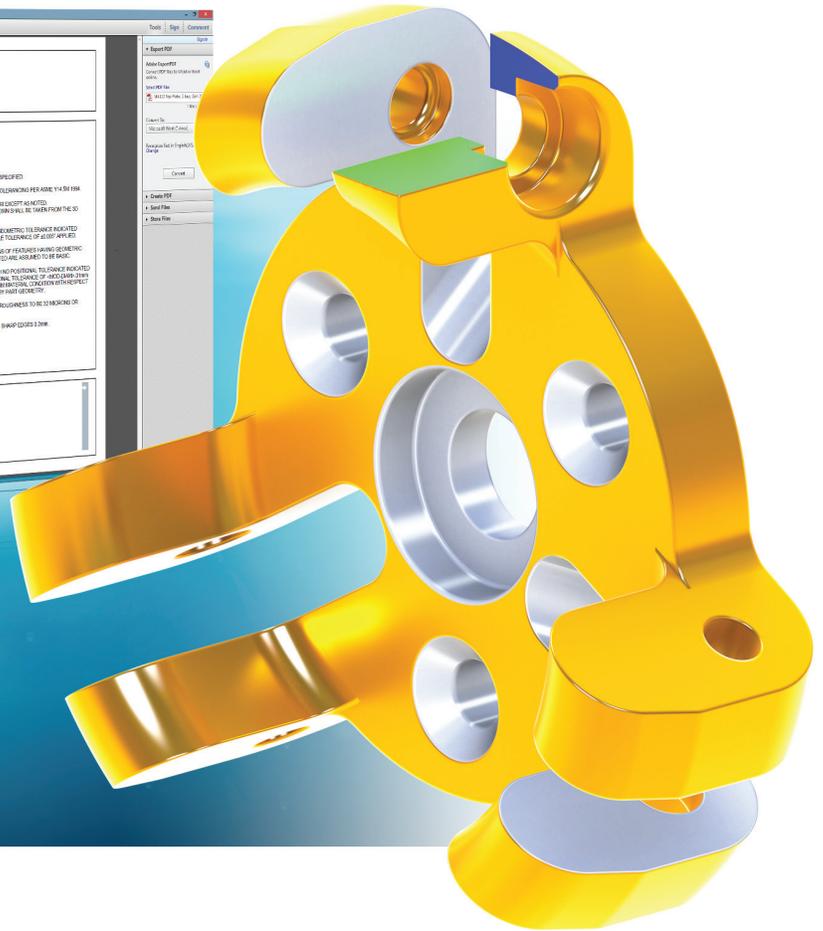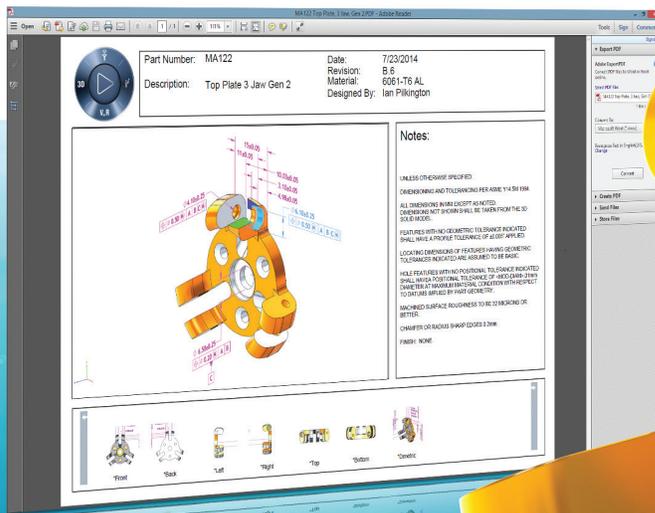
STREAMLINE YOUR OPERATIONS

How much time, money, and resources do you spend in creating and maintaining traditional 2D drawings? What are the typical problems you face? As 3D design becomes more prevalent, the limitations of traditional 2D drawings become more apparent—expensive and time-consuming to create and maintain; prone to mismatch with the 3D model (leading to massive production waste); not compliant with widely accepted and mandated industry standards.

SOLIDWORKS® MBD (Model Based Definition) is an integrated drawingless manufacturing solution for SOLIDWORKS 3D design software. With SOLIDWORKS MBD, you can communicate product and manufacturing information (PMI) directly in 3D, bypassing time-consuming 2D processes, and eliminating potential problems. Companies embracing model-based definition methodologies report savings in multiple areas, including reductions in manufacturing errors, decrease in scrap and rework costs, and lower procurement costs for purchased parts[1].

1 Source: Defense Logistics Agency
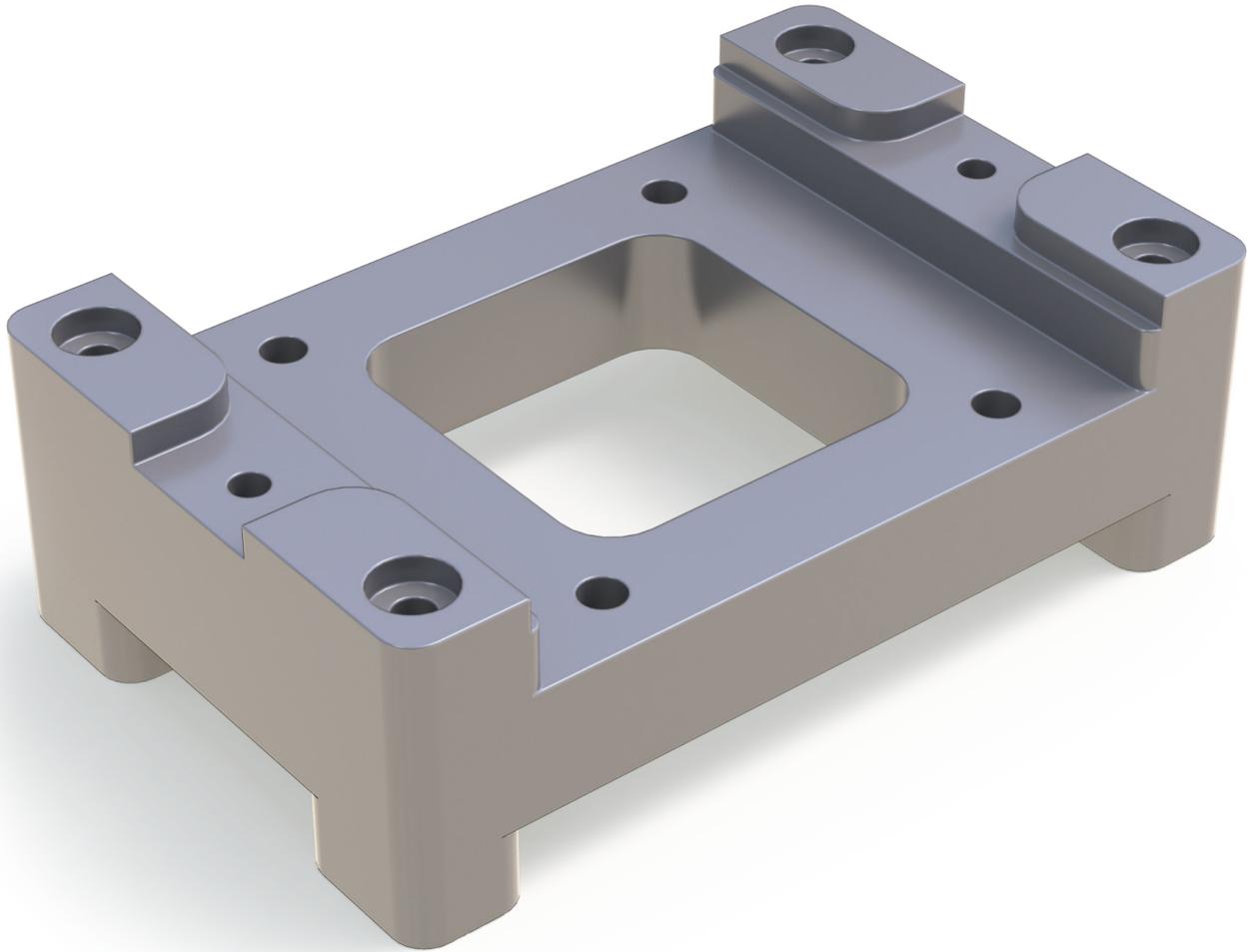
DRAWINGLESS OPERATION TO STREAMLINE AND ACCELERATE PRODUCTION

SOLIDWORKS MBD helps companies define, organize, and publish 3D PMI, including 3D model data in industry-standard file formats (such as SOLIDWORKS files, eDrawings®, and 3D PDF). It guides the manufacturing process directly in 3D, helping to streamline production, cut cycle time, reduce errors, and comply with industry standards, such as Military-Standard-31000A, ASME Y 14.41, ISO 16792, DIN ISO 16792, and GB/T 24734.

SOLIDWORKS MBD sets data such as product models, dimensions, geometric tolerances, surface finishes, welding symbols, bill of materials (BOM), callouts, tables, notes, Meta properties, and other annotations within the SOLIDWORKS 3D environment in 3D PMI. Because all the information needed to guide the operation is integrated with the 3D models, traditional 2D drawings are no longer needed. The intuitive and interactive 3D PMI provided by SOLIDWORKS MBD serves multiple operational use cases, such as part and assembly engineering drawings, Request for Quote (RFQ), and Inspection Reports. It also helps multiple departments and stakeholders across the operation, such as design, procurement, fabrication, assembly, quality, sales, marketing, clients, and suppliers.

SOLIDWORKS MBD HELPS GET DESIGNS TO PRODUCTION, QUICKLY

Define PMI directly in 3D

SOLIDWORKS MBD defines PMI directly in 3D, avoiding the expense and time associated with developing 2D drawings, which can run up to 50 percent of total development cost. Creating 3D PMI also helps speed up communication, cut supplier quoting time, and reduce errors, thanks to its 3D data interrogation, interactivity, and rich Meta properties.

Present 3D data in a clean and structured fashion

Beyond 3D PMI definition, SOLIDWORKS MBD helps organize the rich data into clean and structured 3D presentations with different views and display settings. It can even intelligently show and hide 3D annotations while you are rotating the model to give you extra clarity while still respecting all the critical-to-function annotations.

Customize 3D output templates

SOLIDWORKS MBD delivers a comprehensive set of predefined templates out-of-the-box. Several aspects of the 3D Output Template, such as layout, company, or department logos; 3D viewport and thumbnails; text descriptions; Meta-property links; and tables can also be customized to address specific deliverables, such as Engineering Drawings, RFQ, and Inspection Reports. Once set up, these templates can serve as internal and external process guidelines for all departments, such as manufacturing, operations, quality, and procurement.

Output and distribute 3D data to an existing process

SOLIDWORKS MBD publishes widely accepted file formats, such as eDrawings® and 3D PDF files that are often used in existing processes. eDrawings files can be opened in a free eDrawings Viewer. 3D PDF can be viewed using a variety of free tools including Adobe™ Reader. In addition to providing associative information such as engineering notes, BOM, and rich Meta properties, you can also explore the model in 3D with Pan, Zoom, Rotate, Measure, Section, and other 3D tools.

Comply with industry standards

SOLIDWORKS MBD helps companies comply with predominant industry standards, such as MIL-STD-31000A, ASME Y14.41, ISO 16792, DIN ISO 16792, and GB/T 24734. Compliance gives you competitive advantages to win more contracts and deliver projects to strict requirements, on time, and on budget.

Share, archive, and reuse intelligent 3D data

SOLIDWORKS MBD helps you directly share, archive, and reuse intelligent 3D data including geometry, PMI, views, and data so that you and your suppliers don't have to waste the time creating traditional 2D drawings.

Collaborate with internal and external stakeholders

Need manufacturing annotations from the shop floor or outside vendors? With SOLIDWORKS MBD, that is no problem! Your collaborators can easily review and comment on your design in SOLIDWORKS, eDrawings, or 3D PDF format. The comments are saved in your 3D output for your review, approval, modification, or archive.

Work hand-in-hand with 2D drawings and printouts

SOLIDWORKS MBD integrates seamlessly with existing SOLIDWORKS 2D drawings. The PMI and Views created in 3D are readily available for reuse in 2D. Easily create views containing geometry and PMI using the built in template editor.

Capture complete product data, including title block and BOM information, in multiple 3D Views that can be easily exported to industry standard formats

SOLIDWORKS PRODUCT DEVELOPMENT SOLUTION

SOLIDWORKS software provides users with an intuitive 3D development environment that helps maximize the productivity of your design and engineering resources to create better products faster and more cost-effectively. See the full range of SOLIDWORKS software for design, simulation, technical communication, and data management at **www.solidworks.com/products2015**.

LEARN MORE

Learn more about the features of SOLIDWORKS MBD at www.solidworks.com/share or contact your local authorized SOLIDWORKS reseller.

Our **3D**EXPERIENCE platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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