

# SOLIDWORKS MBD



| Ease of Use/Intuitiveness/Concurrent Engineering                           |   |
|----------------------------------------------------------------------------|---|
| Freestyle Dimensioning, Tolerancing, and Annotation (Reference Dimensions) | ✓ |
| Intelligent Dimensioning, Tolerancing, and Annotation for Parts (DimXpert) | ✓ |
| DimXpert for Assemblies                                                    | ✓ |
| DimXpert Angle Dimension Tool                                              | ✓ |
| Geometric Tolerancing for DimXpert                                         | ✓ |
| Expose Part 3D Annotations to Assemblies                                   | ✓ |
| Import 3D Annotations from Non-SOLIDWORKS Formats                          | ✓ |
| Automatically Pair Tolerances for Mating Components                        | ✓ |
| Sheet Metal Manufacture Information                                        | ✓ |
| 3D Annotation Organization                                                 |   |
| 3D Annotation Views                                                        | ✓ |
| Automatic Show and Hide Annotations as a Model Rotates                     | ✓ |
| Visual 3D Views                                                            | ✓ |
| 3D PMI Compare                                                             | ✓ |
| 3D Publishing                                                              |   |
| eDrawings                                                                  | ✓ |
| 3D PDF Template Customization                                              | ✓ |
| Out-of-box Professional 3D PDF Templates                                   | ✓ |
| 3D PDF with 3D Annotations, Views, and Meta Properties                     | ✓ |
| STEP 242 with Machine-readable 3D Annotations                              | ✓ |
| 3D PDF Accuracy Controls                                                   | ✓ |
| 3D PDF Security Controls                                                   | ✓ |
| Multiple Attachments including STP242 upon 3D PDF Publishing               | ✓ |
| Creating HTML Output from the 3D PDF                                       | ✓ |

## What is SOLIDWORKS MBD?

For manufacturers who want to avoid 2D drawing miscommunications and automate downstream production with intelligent 3D product and manufacturing specifications, SOLIDWORKS MBD is a model-centric application that defines, organizes, and publishes product and manufacturing specifications directly in 3D, which reduces ambiguity, cuts costs, and speeds up time to market.

SOLIDWORKS MBD helps companies define and organize 3D dimensions, tolerances, datums, notes, Bill Of Materials (BOM) and other PMI, customize publishing templates to serve manufacturing use cases such as Part or Assembly Specifications, Request for Quote (RFQ), Incoming Inspection Report and so on, and publish to widely accepted formats such as eDrawings and 3D PDF, which greatly lowers 3D communication barrier.

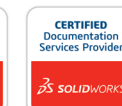
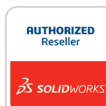
\*3D PDF is a PDF document containing 3D models and PMI that can be opened in a Free Adobe Reader which is already installed on 95% of internet connected computers.

## Capabilities

- Annotate models with datums, datum targets, basic dimensions, toleranced dimensions, polar dimensions, geometric tolerances, surface finishes, weld symbols, draft symbols, balloons, BOMs, notes, coordinate systems, reference geometries, intersection geometries, continuous features, compound features, and other Product Manufacturing Information (PMI).
- Defines feature-based annotations (DimXpert) for parts and assemblies.
- Recognizes manufacturing features automatically on native or imported solid bodies.
- Automates the annotation definition by the model type, tolerance type, pattern dimensioning, reference features, and scope.
- Imports 3D annotations from non-SOLIDWORKS formats such as Creo®, NX, CATIA®, and STEP 242.
- Visual and comprehensive 3D views
- Automatic showing and hiding of annotations as a model rotates
- 3D annotation comparison between revisions from the SOLIDWORKS PDM Vault or outside of the vault
- STEP 242 export with software-readable 3D annotations
- Out-of-box professional 3D PDF templates to save time in template customization
- BOM tables and Notes publishing into 3D PDF documents
- Flexibly display BOM tables to save space on a 3D PDF page
- Multiple attachments including STEP 242 upon 3D PDF publishing
- Accuracy and file size controls on 3D PDF documents
- Sheet metal annotation
- Greater intellectual property protection
- Copy dimensions schemes to derived parts

## Benefits

- Speed up time-to-market with tolerance-based automatic programming of tolerance analysis, tolerance optimization, Computer-Aided Manufacturing (CAM), Coordinate Measuring Machine (CMM), and other production applications.
- Strategize datum and tolerance requirements during 3D designs, rather than adding them as an afterthought in 2D detailing, or switching back and forth between 3D models and 2D drawings.
- Avoid discrepancies between 3D models and 2D drawings which can result in massive manufacturing wastes.
- Qualify for more business opportunities by complying with model-based definition standards and regulations such as the military standard 31000A.
- Reduce expensive service, support, and maintenance costs with unambiguous communications and less-fragmented 3D documentation.



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