

# **SOLIDWORKS**

## **SOLIDWORKS INSPECTION**

### OBJECTIVE

For companies that create inspection documents, SOLIDWORKS Inspection automates the ballooning of engineering drawings and 3D files with Product and Manufacturing Information (PMI), minimizes the time needed to record inspection measurements, and streamlines the creation of industry-standard inspection reports by leveraging existing 2D and 3D CAD data.

### OVERVIEW

Quality control and planning often involve the creation of documents such as drawings with balloon callouts and inspection reports. This time-consuming task is usually the responsibility of designers or quality inspectors. They can spend hours every day manually creating all these documents and ensuring the parts they designed are manufactured according to specifications.

SOLIDWORKS Inspection is a First Article Inspection (FAI) and in-process inspection solution that greatly simplifies and automates the reporting process. SOLIDWORKS Inspection is easy-to-use, integrated with SOLIDWORKS CAD, and available as a standalone application to work with other CAD systems. Companies can easily deploy it, train their quality department, and start to optimize their inspection and quality processes. This saves time, lowers costs, and wins more business by eliminating the bottlenecks in quality inspection and increasing throughput in manufacturing.

### BENEFITS

- Saves up to 90% of time performing inspections and creating inspection documents.
- Helps to create detailed reports in minutes.
- Improves time-to-market.
- Eliminates errors and inconsistencies.
- Supports a variety of 2D and 3D CAD data as well as PDF and TIFF files.
- Complies with industry standards.
- Quickens Return of Investment (ROI).

### CAPABILITIES

#### CAD Agnostic

You can create your inspection documents regardless of your existing CAD system, using either the standalone SOLIDWORKS Inspection application or the integrated SOLIDWORKS Inspection add-in.

#### Optical Character Recognition (OCR)

When working with a PDF or TIFF drawing, SOLIDWORKS Inspection uses Optical Character Recognition (OCR) to read and identify the nominal dimension, plus and minus tolerances, and the type of dimension (such as diametric or linear), helping to virtually eliminate manual input and reduce errors. It works with horizontal and vertical dimensions, split dimensions, notes, hole callouts, finish symbols, and Geometric Dimensioning and Tolerancing (GD&T) symbols.

#### Revision Management

Avoid errors and quickly identify changes using SOLIDWORKS Inspection advanced 2D & 3D comparison tools.

#### Customizable Inspection Reports

In just a few clicks, you can create industry-compliant inspection reports (such as AS9102, PPAP, and ISO 13485) or use the powerful template editor to develop a report that matches your company's needs.

## SOLIDWORKS Inspection Standard

SOLIDWORKS Inspection Standard streamlines the creation of inspection documentation. SOLIDWORKS Inspection Standard consists of a standalone application and an embedded SOLIDWORKS add-in that enables users to leverage their legacy 2D data regardless of whether they have SOLIDWORKS Drawings files, PDF, TIFF, DXF, or DWG files. SOLIDWORKS Inspection Standard is for designers, quality engineers, technicians, and inspectors who are responsible for creating industry-standard inspection documents.

With SOLIDWORKS Inspection Standard, users can:

- Use the standalone application or the SOLIDWORKS add-in to quickly balloon and create inspection reports regardless of the existing CAD system.
- Work with 2D data such as SOLIDWORKS drawing files, PDF, TIFF, DXF or DWG files.
- Automatically balloon inspection dimensions specified by the designer or mechanical engineer.
- Create custom OCR dictionaries.
- Improve OCR readings using ExtractionXpert.
- Calculate the proportion of defects authorized using Acceptance Quality Limit (AQL) tables.
- Manually or automatically extract characteristics from drawings.
- Extract multiple characteristics at once using Smart Extract.
- Define and use multiple tolerance tables.
- Customize balloon appearance using presets.
- Instantly export finished ballooned drawings as PDFs.
- Export inspection reports to Microsoft® Excel® using standard templates.
- Customize Excel templates using the template editor to follow company or industry standards.
- Manage inspection projects and related documents using SOLIDWORKS PDM.
- Export inspection data directly to quality systems such as Verisurf, QualityXpert and Net-Inspect, and to databases using CSV or XML output formats.

## SOLIDWORKS Inspection Professional

SOLIDWORKS Inspection Professional extends SOLIDWORKS Inspection Standard's capabilities by allowing users to almost automatically enter measured values into an inspection project. Each characteristic's value can be entered manually, with the use of a digital caliper or by importing Coordinate Measuring Machine (CMM) results. Additionally, SOLIDWORKS Inspection Professional also enables users to work directly with 3D CAD data, streamlining their workflows even more as part of a company-wide, drawing-free strategy.

SOLIDWORKS Inspection Professional is for quality engineers, technicians, and inspectors who are responsible for inspecting parts, recording measurements, and operating or programming inspection equipment, including calipers, CMM, and optical measuring devices.

With SOLIDWORKS Inspection Professional, users can also:

- Use the standalone application or the SOLIDWORKS add-in to quickly balloon and create inspection reports from 2D and 3D CAD files, PDF, and TIFF files.
- Enter measured values for each characteristic directly into the project either manually or by using a digital caliper.
- Import CMM results (PC-DMIS, Calypso, Faro CAM2, and others).
- Highlight dimensions in green, red, or yellow to instantly see which dimensions are in tolerance, out of tolerance, or marginally within tolerance based on the values entered.
- Automatically verify results.
- Export color-coded ballooned drawings and inspection reports to improve clarity.
- Export ballooned 3D model as 3D PDF or eDrawings® file.

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