

SOLIDWORKS®

SOLIDWORKS Inspection

Dassault Systèmes SolidWorks Corporation
175 Wyman Street
Waltham, MA 02451 U.S.A.

© 1995-2024, Dassault Systemes SolidWorks Corporation, a Dassault Systèmes company, 175 Wyman Street, Waltham, Mass. 02451 USA. All Rights Reserved.

The information and the software discussed in this document are subject to change without notice and are not commitments by Dassault Systemes SolidWorks Corporation (DS SolidWorks).

No material may be reproduced or transmitted in any form or by any means, electronically or manually, for any purpose without the express written permission of DS SolidWorks.

The software discussed in this document is furnished under a license and may be used or copied only in accordance with the terms of the license. All warranties given by DS SolidWorks as to the software and documentation are set forth in the license agreement, and nothing stated in, or implied by, this document or its contents shall be considered or deemed a modification or amendment of any terms, including warranties, in the license agreement.

For a full list of the patents, trademarks, and third-party software contained in this release, please go to the Legal Notices in the SOLIDWORKS documentation.

Restricted Rights

This clause applies to all acquisitions of Dassault Systèmes Offerings by or for the United States federal government, or by any prime contractor or subcontractor (at any tier) under any contract, grant, cooperative agreement or other activity with the federal government. The software, documentation and any other technical data provided hereunder is commercial in nature and developed solely at private expense. The Software is delivered as "Commercial Computer Software" as defined in DFARS 252.227-7014 (June 1995) or as a "Commercial Item" as defined in FAR 2.101(a) and as such is provided with only such rights as are provided in Dassault Systèmes standard commercial end user license agreement. Technical data is provided with limited rights only as provided in DFAR 252.227-7015 (Nov. 1995) or FAR 52.227-14 (June 1987), whichever is applicable. The terms and conditions of the Dassault Systèmes standard commercial end user license agreement shall pertain to the United States government's use and disclosure of this software, and shall supersede any conflicting contractual terms and conditions. If the DS standard commercial license fails to meet the United States government's needs or is inconsistent in any respect with United States Federal law, the United States government agrees to return this software, unused, to DS. The following additional statement applies only to acquisitions governed by DFARS Subpart 227.4 (October 1988): "Restricted Rights - use, duplication and disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252-227-7013 (Oct. 1988)."

In the event that you receive a request from any agency of the U.S. Government to provide Software with rights beyond those set forth above, you will notify DS SolidWorks of the scope of the request and DS SolidWorks will have five (5) business days to, in its sole discretion, accept or reject such request. Contractor/ Manufacturer: Dassault Systemes SolidWorks Corporation, 175 Wyman Street, Waltham, Massachusetts 02451 USA.

Contents

Introduction

About This Course	2
Prerequisites	2
Course Design Philosophy	2
Using this Book	2
About the Training Files	3
Conventions Used in this Book	4
Windows 10	5
Use of Color	5
More SOLIDWORKS Training Resources	5
Local User Groups	5

Lesson 1: Inspection Add-in

What is SOLIDWORKS Inspection?	8
Inspection Add-in	9
Inspection Project	10
Project Template	10
Case Study: Inspection Project	10
General Settings	11
Extraction Settings	15
Tolerance Settings	18

SOLIDWORKS Inspection Manager 20

 Characteristics. 20

 Characteristic Properties 21

 Balloon Settings 23

 Reorder Balloons 25

 Multiple Characteristic Instances 26

 Multi-line Notes 28

Export Inspection Data 30

Design Revision 32

Manual Ballooning 34

 Standalone Application. 37

Working with 3D Documents 38

Exercise 1: Balloon Characteristics 41

Exercise 2: Publish Reports and Export Project 44

Exercise 3: Extract and Export 3D Part 46

Lesson 2:

Standalone Application

Overview. 50

User Interface 50

 Shortcut Keys 51

Case Study: Inspection Project 52

Inspection Project 52

 Project Template 53

 Project Properties 54

 Save Options. 60

 Unit/Tolerance Options. 61

 Ballooning Options. 62

Manual Extract 63

 Characteristic Pane 70

 Hide and Show Extracted Annotations. 74

 Auto Extract 77

 GDT Builder 79

General Characteristic Tools. 81

 Validating Characteristics. 82

Table Manager 83

 Bill of Material 84

 Specifications 84

 Characteristics. 84

Managing Characteristics	85
Reorder Balloons	86
Grids	91
Multiple Documents	93
Publishing Reports	94
Drawing Revisions	98
Exercise 4: Balloon Dimensions.	101
Exercise 5: Balloon Notes.	103
Exercise 6: Publish Ballooned Drawing and Inspection Report.	104
Lesson 3:	
SOLIDWORKS Inspection Professional	
Overview.	108
Measurements Input	108
CMM Data Import	108
Loading the Inspection Professional Add-in.	108
Case Study: Measurements Input	109
Measurements Input	110
Measurement Entries	111
Color Coded Characteristics	111
Multiple Measurements	114
Bonus Tolerance	115
Publishing Reports With Inspection Results.	115
CMM Data Import	117
Case Study: Import CMM Data	118
Exercise 7: Measurements Input.	125
Exercise 8: CMM Import	128
Appendix A:	
Inspection Report Templates	
Inspection Report Templates.	130
Template Editor.	130
Report Formatting.	131
Tokens.	132
Excel Conditional Formatting.	135
Footer Row	138
Appendix B:	
Understanding Regular Expressions	
Regular Expressions	144
Appendix C:	
Glossary of Quality Terms	
Terminology	148