Practicing your skills with projects
Practicing your skills with projects
Proprietary and restricted rights notice

This software and related documentation are proprietary to Siemens Product Lifecycle Management Software Inc.

© 2010 Siemens Product Lifecycle Management Software Inc. All Rights Reserved.
All trademarks belong to their respective holders.

SOLID EDGE
VELOCITY SERIES

...with Synchronous Technology
Contents

Introduction ....................................................... 1-1

Additional modeling projects ................................. 2-1
  Introduction ..................................................... 2-1
  Base plate ....................................................... 2-1
  Bearing block A .................................................. 2-3
  Bearing block B .................................................. 2-5
  Column base ...................................................... 2-7
  Dovetail bracket .................................................. 2-9
  Dovetail stop .................................................... 2-11
  Gland blank ...................................................... 2-13
  Gland .......................................................... 2-15
  Guide plate ...................................................... 2-17
  Head attachment ................................................ 2-19
  Head yoke ....................................................... 2-21
  Rod support ..................................................... 2-23
  Saw blade ........................................................ 2-25
  S-bracket ....................................................... 2-27
  Side beam bracket .............................................. 2-29
  Slide stop ...................................................... 2-31
  Slotted link ..................................................... 2-33
  Swivel plate .................................................... 2-35
  Trunnion plate ................................................ 2-37

Construct a bicycle hand tool ............................... 3-1
  Major dimensions ............................................... 3-2
  Socket and wrench dimensions ............................. 3-3

Construct an intercom speaker cover ..................... 4-1
  Major Dimensions ............................................... 4-2

Construct a bicycle saddle shell ............................ 5-1
Lesson

1 Introduction

Welcome to self paced training for Solid Edge. This course is designed to educate you in the use of Solid Edge. The course is self-paced and contains instruction followed by activities.

Solid Edge self-paced courses

- spse01510—Sketching
- spse01515—Constructing base features
- spse01520—Moving and rotating faces
- spse01525—Working with face relationships
- spse01530—Constructing treatment features
- spse01535—Constructing procedural features
- spse01536—Modeling synchronous and ordered features
- spse01540—Modeling assemblies
- spse01541—Explode-Render-Animate
- spse01545—Creating detailed drawings
- spse01546—Sheet metal design
- spse01550—Practicing your skills with projects
- spse01560—Modeling a Part Using Surfaces
- spse01610—Solid Edge frame design
- spse01640—Assembly patterning
- spse01645—Assembly systems libraries
- spse01650—Working with large assemblies
- spse01655—Revising assemblies
- spse01660—Assembly reports
- spse01665—Replacing parts in an assembly
Lesson 1  Introduction

- **spse01670**—Designing in the context of an assembly
- **spse01675**—Assembly features
- **spse01680**—Inspecting assemblies
- **spse01685**—Alternate assemblies
- **spse01690**—Virtual components in assemblies
- **spse01695**—XpresRoute (tubing)
- **spse01696**—Creating a Wire Harness with Harness Design
- **spse01424**—Working with Solid Edge Embedded Client

**Start with the tutorials**

Self-paced training begins where tutorials end. Tutorials are the quickest way for you to become familiar with the basics of using Solid Edge. If you do not have any experience with Solid Edge, please start by working through the tutorials for basic part modeling and editing before starting this self-paced training.
Lesson

2  Additional modeling projects

Introduction

This section contains additional parts for modeling practice. Each part in this section can be created in several different methods using a variety of commands in Solid Edge. There is no correct or incorrect method to create these parts. Experiment with different commands and options in an effort to learn as much about each command as possible. There is an isometric view of each part to give you a better idea as to what the finished part looks like. There are also principal views that contain the dimensions needed to create the part. There may be more dimensions than are needed in the drawings.

Base plate
Lesson 2  
Additional modeling projects

Practicing your skills with projects
Bearing block A
Lesson 2  Additional modeling projects

Practicing your skills with projects

2-4  Practicing your skills with projects
Bearing block B
Lesson 2  Additional modeling projects

Practicing your skills with projects

spse01550
Column base
Lesson 2  
Additional modeling projects

Practicing your skills with projects
Dovetail bracket
Lesson 2  
Additional modeling projects

- Practicing your skills with projects

Diagram of mechanical parts with dimensions and notes:
- 2-10
- R 1.000
- Φ 1.000 x 2 holes
- 750 
- 60°
Dovetail stop
Lesson 2

Additional modeling projects
Gland blank
Lesson 2  Additional modeling projects

Practicing your skills with projects
Gland
Lesson 2  Additional modeling projects

Practicing your skills with projects
Guide plate
Lesson 2  
Additional modeling projects
Head attachment
Lesson 2  Additional modeling projects

Practicing your skills with projects
Head yoke
Rod support
Lesson 2  
Additional modeling projects

Practicing your skills with projects

spse01550
Saw blade
Lesson 2  
*Additional modeling projects*
S-bracket
Lesson 2  Additional modeling projects

Practicing your skills with projects

spse01550
Side beam bracket
Lesson 2  Additional modeling projects

Practicing your skills with projects
Slide stop
Lesson 2  Additional modeling projects

Practicing your skills with projects
Slotted link
Lesson 2  Additional modeling projects

Practicing your skills with projects
Swivel plate
Lesson 2  Additional modeling projects

Practicing your skills with projects

spse01550
Trunnion plate
Lesson 2  Additional modeling projects
Lesson

3 Construct a bicycle hand tool

Model a wrench used specifically for removing the pedal cranks from a bicycle.
Major dimensions

- Use the following dimensions when constructing the overall shape of the tool.
Socket and wrench dimensions

- Use the following dimensions when constructing the socket and Allen wrench.
Construct a bicycle hand tool

Practicing your skills with projects
Lesson

4 Construct an intercom speaker cover

Create a cover plate for a ceiling-mounted intercom speaker.
Lesson 4  
*Construct an intercom speaker cover*

**Major Dimensions**
Construct an intercom speaker cover

Practicing your skills with projects
Lesson

5  Construct a bicycle saddle shell

Transform a basic model into an anatomically correct shell for a bicycle saddle.

- Open saddle_ex.par from the zip file spse01550.zip you previously downloaded.

- Some hints:
Lesson 5  Construct a bicycle saddle shell

10mm RAD TYP

Features
- Protrusion 2
- Cutout 1
- Extrude 3
- Extrude 4
- Extrude 5

Practicing your skills with projects
Construct a bicycle saddle shell

Practicing your skills with projects

5-3
Lesson 5  
*Construct a bicycle saddle shell*

- Finished saddle:

  **Note**

  Applying a texture is optional. See the Help topic on “Style Command” to learn more.