AUTODESK FUSION 360

2026

BLOG

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Learning Tutorials

A Note to Our Readers

2026

This blog has been created using a combination of artificial intelligence tools and human review to help deliver clear, structured, and up-to-date learning content.

All technical topics, examples, and workflows are curated to support learning and skill development. While every effort is made to ensure accuracy and clarity, readers are encouraged to validate concepts through hands-on practice and documentation. Our goal is to make learning more accessible, efficient, and practical for everyone.

Disclaimer:

— CADIN360 Team

HOW TO COPY SOLID BODY IN FUSION 360

• LEARN • • APPLY • • GROW •

Introduction

Copying a solid body in Fusion 360 is a fundamental skill that can significantly speed up your 3D modeling workflow. Whether you're designing complex assemblies or simple parts, knowing how to effectively duplicate bodies enables you to build more efficiently and maintain design consistency. In this comprehensive guide, you'll learn the step-by-step process for copying solid bodies — from basic functions to advanced techniques — ensuring you can execute this task with confidence. Let’s explore how to copy solid bodies in Fusion 360, along with practical tips, common pitfalls, and best practices.

How to Copy a Solid Body in Fusion 360

Copying solid bodies in Fusion 360 involves several methods, depending on whether you want a quick duplicate or a more controlled copy with multiple options. Here, we'll go through the most effective and commonly used techniques.

1. Using the Move/Copy Tool

The Move/Copy tool is the most straightforward way to duplicate and reposition solid bodies within your design.

- Open your Fusion 360 project and select the solid body you want to copy.
- Navigate to the **Modify** drop-down menu and choose **Move/Copy**.
- In the dialog box, ensure the **Bodies** option is selected.
- Check the **Copy** checkbox to create a duplicate rather than move the original.
- Use the manipulators (arrows, rotation rings) or input precise values for distance, rotation, and direction.
- Click **OK** to finalize the duplication.

Practical Tip: Use the Move/Copy tool for quick spatial arrangements or to create multiple instances of the same body at different locations.

2. Using the Pattern Tools for Multiple Copies

If you need multiple identical bodies arranged systematically, pattern tools are highly efficient.

- Select the solid body you want to copy.
- Go to the **Create** menu and choose **Pattern**.
- Select **Rectangular Pattern**, **Circular Pattern**, or **Pattern on Path** depending on your arrangement needs.
- Define the pattern parameters (e.g., number of instances, spacing, direction).
- Confirm to generate multiple copies in a single step.

Real-world example: Creating multiple holes, posts, or gear teeth evenly spaced.

3. Duplicating Bodies Using Save as New Component

This method is useful when copying bodies across different designs or components.

- Right-click the solid body in the browser panel.
- Select **Save as New Component**.
- Name the new component for clarity.
- You now have a duplicate component that can be moved, modified, or reused independently.

Note: This is more of a component duplication technique but effectively creates a copy of the body within a new context.

4. Copying Bodies via Derived Components (Advanced)

Derived components are useful when copying bodies from other designs or projects.

- Insert or import the target design into your current workspace.
- In the browser, right-click the body you wish to copy and choose **Derive**.
- Place or position the derived component where needed.
- This method keeps references to the original, useful for parametric updates.

Tip: Use this when collaborating between multiple designs or maintaining design intent.

Practical Examples of Copying Solid Bodies

Example 1: Duplicating a Mechanical Part

Suppose you designed a gear and now need multiple gear teeth or identical gear assemblies.

- Use the Move/Copy tool to quickly duplicate gear bodies.
- For multiple teeth, apply a Circular Pattern over the gear body to create evenly spaced teeth simultaneously.

Example 2: Creating Variations of a Part

You might want different versions of an identical part, such as a handle with slight modifications.

- Use Save as New Component to duplicate the original.
- Edit each component independently for variations without affecting the original.

Example 3: Arranging Multiple Components

Designing an array of supports or fixtures? Use the Pattern tools to create multiple copies aligned systematically, saving time and ensuring precision.

Common Mistakes When Copying Solid Bodies

- **Not selecting the correct body**: Ensure the right body is highlighted before copying.
- **Forgetting to check the Copy option** in Move/Copy — inadvertently move the original instead of creating a duplicate.
- **Overlooking constraints or references** in assemblies — copying bodies without adjusting their positioning or references can cause mismatches.
- **Ignoring the need for organized naming** — duplicate bodies can clutter the browser and cause confusion if not named properly.

Best Practices and Pro Tips

- **Use Named Components or Bodies**: Helps keep your file organized and copies easier to manage.
- **Combine Pattern with Copying**: Pattern tools can create multiple copies instantly, reducing manual effort.
- **Leverage Components for Reusability**: Save duplicated bodies as components if you plan to reuse or reassemble later.
- **Maintain Parametric Links**: When copying within a design, use derived or linked bodies to keep parametric control.
- **Regularly Save Versions**: Always keep backups before performing bulk copies or complex patterning to prevent data loss.

Comparing Copying Methods: When to Use Which?

Method	Best For	Pros	Cons
Move/Copy Tool	Quick duplication and positioning	Fast, flexible, intuitive	Manual process per copy

Pattern Tools	Multiple copies along a path or grid	Efficient for systematic copies	Limited to specific pattern types
Save as New Component	Reusing in different designs	Keeps bodies isolated, reusable	Creates separate components
Derived Components	Collaborative, linked copies	Maintains parametric link	Less control over individual bodies

Conclusion

Learning how to copy solid bodies in Fusion 360 is essential for efficient modeling workflows. Whether you need a single duplicate, a pattern of multiple bodies, or a reusable component, Fusion 360 offers versatile tools to meet your needs. By mastering techniques like Move/Copy, pattern creation, and component duplication, you can streamline your design process, improve accuracy, and foster creativity.

Remember, choosing the right method depends on your specific task—use pattern tools for multiples, Move/Copy for quick adjustments, and components to organize your project. Practice these techniques to become more proficient, and you'll significantly enhance your Fusion 360 modeling skills.

FAQ

1. How do I copy a solid body to another design in Fusion 360?

Ans: Use the Insert or Derive feature to import or link the body into the new design, or save it as a new component and insert it into the other project.

2. Can I duplicate a body and keep it linked to the original in Fusion 360?

Ans: Yes, by using derived components or linked parameters, you can maintain a relationship between the original and the copy.

3. What's the best way to duplicate multiple bodies at once?

Ans: Use the Pattern tools such as Rectangular Pattern, Circular Pattern, or Pattern on Path to duplicate bodies efficiently.

4. How can I ensure the copied bodies are positioned precisely?

Ans: Use the Move/Copy tool with exact numerical inputs and constraints to position bodies accurately.

5. Is it possible to copy a body and keep its features?

Ans: Yes, copying bodies with features can be achieved using pattern tools or by duplicating components that include features.

6. What's the difference between copying a body and exporting/importing models?

Ans: Copying a body within a design keeps it parametric and editable; exporting and importing models create separate, static copies outside Fusion 360.

7. How do I avoid common mistakes when copying bodies?

Ans: Always select the correct original body, double-check the Move/Copy options, and organize your names to prevent confusion.

About CADIN360

2026

CADIN360 Learning Tutorials is an educational platform focused on practical CAD, CAM, and CAE learning.

The platform provides clear, industry-oriented tutorials, design workflows, and real-world insights using tools such as Autodesk Fusion 360.

CADIN360 is created to help learners, students, and professionals build strong fundamentals and practical design skills in modern CAD workflows.

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Learning Tutorials

Practice What You've Learned

2026

You've just completed this blog and learned important concepts in Autodesk Fusion 360.

To help you practice and apply what you've learned, the next pages include a sample from our Fusion 360 book .This sample contains practice exercises and real-world practice tasks designed to strengthen your skills.

What you'll find next:

- ✓ Practice exercises from the book
- ✓ A brief overview of the complete book
- ✓ Options to explore or request the full sample

Your hands-on Fusion 360 practice starts next.

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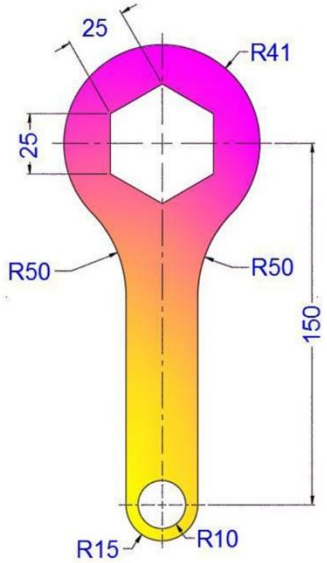
- Assembly



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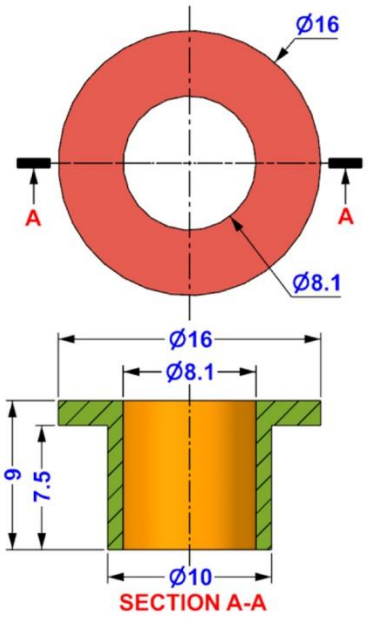
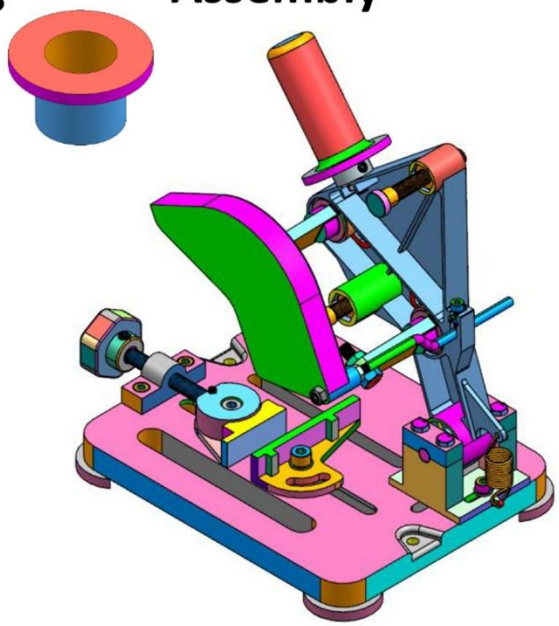


3D Modeling



Assembly

SACHIDANAND JHA

AUTODESK

FUSION 360 ALL IN ONE WORKBOOK

500+ PRACTICE EXERCISES

2D Sketching • 3D Modeling • Assembly Drawings

SACHIDANAND JHA

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This book contains over 500 carefully crafted practice drawings, including:

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Comprehensive Assembly Models with 150+ Individual Part Drawings

We founded CADIN360 in 2016 with the goal of delivering practical, high-quality learning material for CAD software. More than 9 years later, we're still committed to producing consistently exceptional books. With each of our titles, we're working hard to set a new standard for the industry. From the paper we print on, to the authors we work with, our goal is to bring you the best books available.

I hope you see all that reflected in these pages. I'd be very interested to hear your comments and get your feedback on how we're doing. Feel free to let me know what you think about this or any other CADIN360 book by sending me an email at cadin360@gmail.com

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Best regards,

Sachidanand Jha
Founder & CEO, CADIN360

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AUTODESK FUSION 360 ALL IN ONE WORKBOOK

- This book contains over 500 CAD practice exercises, organized as:

  1. 200 2D Sketching Exercises
  2. 200 3D Modeling Exercises
  3. Assembly Projects with 150+ Part Drawings

- This book is a practice workbook. It does not include step-by-step tutorials for creating 2D drawing, 3D models and Assembly.

- SI units (millimeters) are used for all dimensions.

- Third Angle Projection is used throughout this book.

- This book is for **AUTODESK FUSION 360** and also suitable for Other Feature-Based Modeling Software such as Inventor, Catia, SolidWorks, NX, Solid Edge, AutoCAD, PTC Creo etc.

- Designed for students, engineers, drafters, and designers looking for extensive CAD practice using Autodesk Fusion 360.

- The exercises cover a wide range of real-world modeling challenges—from simple sketches to complex assemblies—offering clear, concise, and structured drawing practice.

- Exercises are organized to gradually develop beginner to advanced-level design skills.

- Each exercise is self-contained, and can be completed independently.

- Assembly drawings follow industry standards to help improve visualization and multi-part modeling skills.

- All dimensions are in mm. Assume missing dimensions logically.

HOW TO USE THIS BOOK

This book contains over 500 CAD practice exercises, designed for self-paced learning using Autodesk Fusion 360 or any feature-based modeling software.

- 2D Sketching Exercises: Start here if you're a beginner or learning how to use the sketch environment.

- 3D Modeling Exercises: Follow after mastering sketching. Practice creating solid models using the provided dimensions.

- Assembly Drawings: Use after completing part models to understand multi-part assemblies, relationships, and constraints.

Tips for Best Use:

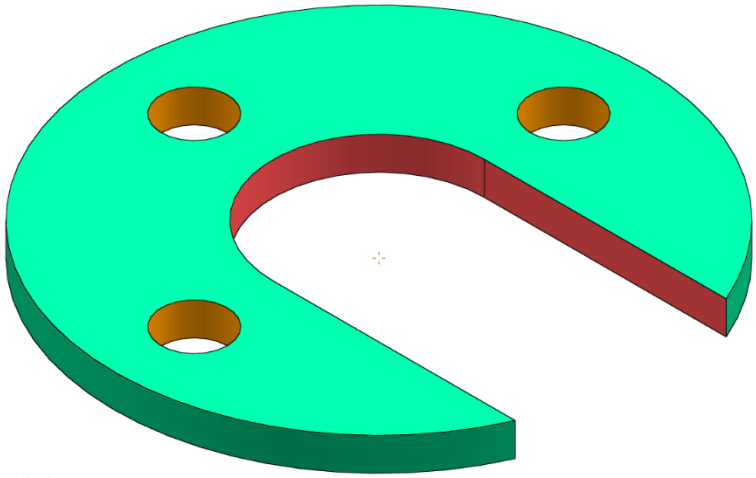
- Complete the exercises in order, or jump to any skill level you prefer.
- All dimensions are in millimeters.
- Where dimensions are missing, apply logic or practice estimation.
- This book is ideal for both students and professionals preparing for industry design work.

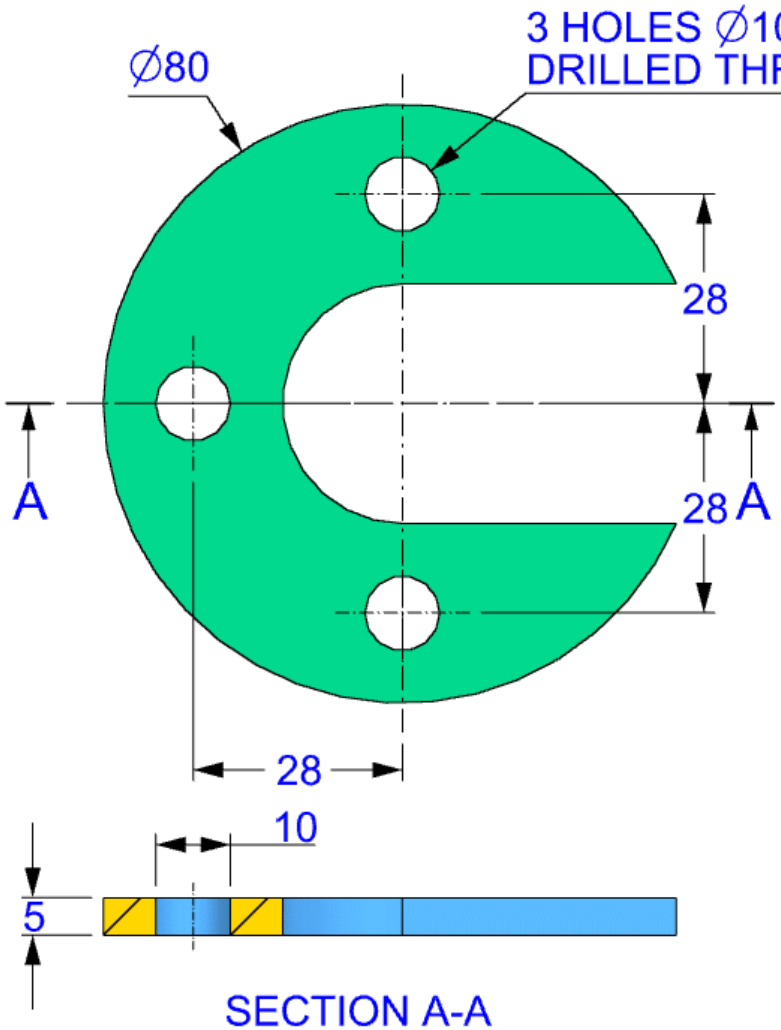
Note:

This book is available in multiple formats – **Black & White**, **Standard Color**, and **Premium Color** editions.

Happy learning!
– Team CADIN360

EXERCISE-01





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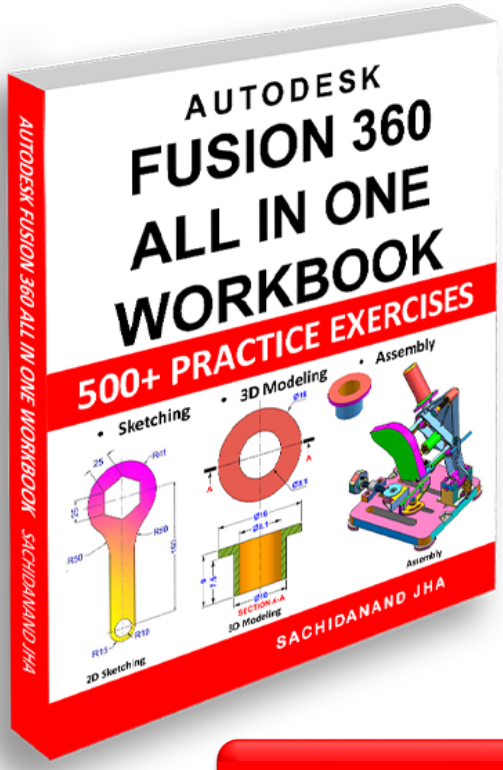

What's Included in the FUSION 360 ALL IN ONE WORKBOOK?

- ✓ Books contains exercises of Sketching, 3D Modeling & Assembly.
- ✓ 500+ Practice Exercises with Dimensions
- ✓ Full Assembly STEP Files (.stp format) – Compatible with all major CAD software
- ✓ Get 200 3D Exercises in .f3d file format
- ✓ Get All Assembly Exercises in .STP file
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Happy Designing!
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Master Fusion 360 with Real-World Practice Exercises

This book contains over 500 Fusion 360 practice exercises including sketching, 3D modeling, and assembly drawings. Designed for students, engineers, and professionals to build practical CAD modeling skills.

AUTODESK FUSION 360 ALL IN ONE WORKBOOK

This book contains:-

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Multi-part Assembly Exercises & Detailed Drawings
- All drawings in 3rd Angle projection
- All dimensions are in mm(metric system)