

Welcome to Paulson Training Programs, Inc. SimTech™ Virtual Lab Lessons



SimTech™ is the world's most advanced injection molding simulator you can use to practice machine setup, molded-part problem solving, and cycle reduction all on your computer. Increase the number of molding experts in your facility in a fraction of the time it takes with "on-the-job training" with this powerful, proprietary, physics and math based (not rule-based) simulator. SimTech comes with pre-defined lab lessons depicting different molding scenarios with four levels of difficulty with new labs released monthly. Or you can set up your own "molding scenarios" with FreeMold for your employees to solve, focusing on just the specific problem you want. SimTech will revolutionize the way you train your employees.

Important Notice

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What is SimTech™?

SimTech™ is an Injection molding machine simulator (think Flight simulator for Injection Molding). It is based on physics and mathematics – ***not*** ruled-based and can perform over 26 million calculations. SimTech is designed to be used after an interactive training module has been taken to allow a student to apply what they have learned furthering their understanding of the subject matter.

What are some of the Key Features & Benefits of SimTech?

- Runs a cycle in a 1-2 seconds
- 22 fully functioning molding machine controls, including Velocity-to-Pressure transfer (VPT)
- Reports 8 of the most common part problems from molding conditions
- Provides students with “at-the-machine” skills training without:
 - Wasting machine time
 - Wasting plastic
 - Risking damaging the machine or mold
- Interactive
- Units can be either US (English) or SI (Metric)
- Turns learning into a challenging “game”

How is SimTech different than Skillbuilder?

Skillbuilder is a simplified version of SimTech. Pre-programmed lessons lead the student on a specific path to address a pre-defined problem. Skillbuilder serves as the introduction to the use of SimTech.

SimTech allows a student to use their molding knowledge to improve machine set-ups and solve problems by making machine control changes, cycling the machine, and then analyzing the Cycle Results. Paulson provides lab lessons with predefined setups that require molded part problems to be solved along with cycle optimization. With SimTech, managers can also set up their own problem scenarios for the employees to solve.

What is the difference between SimTech “FreeMold” and SimTech Lab lessons?

Both run through SimTech. Lab Lessons are pre-defined lessons that Paulson has created which are assigned to personnel to target specific areas of learning.

“Freemold” operation lets ***you*** decide your own set-up by choosing your machine size, plastic, mold and dimensional tolerance from the Simtech database. You can set up scenarios for your employees or peers to solve specific molding problems, or just optimize a cycle.

How are my lab lessons scored?

Each lab lesson description states what must be accomplished in order to complete a lesson.



SimTech™

How to Use this Manual

The SimTech™ Lab Lessons are designed to be used in conjunction with the interactive training courses. After you have taken The Technology of Injection Molding Levels 1 & 2, and the Injection Molding Problems and Solutions course (along with the Skillbuilder lessons that accompany them), you will be ready to take the SimTech Lab Lessons. Now you can really apply what you have learned!

The manual is split up into sections.

- 1. How to Use this Manual** – Instructions on how to use the SimTech manual.
- 2. Training Administrator Instructions** – How to sign students up for SimTech lab lessons.
- 3. Tutorial Answer Key** – All the answers to the Student Workbook Tutorial for the training administrator.
- 4. Student Tutorial Workbook – Getting Started** – How to begin the Student Tutorial.
- 5. Student Tutorial Workbook** - Familiarizes the student with how to use SimTech. If a student is already familiar with SimTech, they can skip right to the Lab Lessons.
- 6. Student Tutorial Workbook - Answer Sheet** – Can be used to make copies for each student in order to write their answers for the Student Workbook Tutorial exercise.
- 7. Lab lessons – Getting Started** – How to log into the SimTech Lab lessons.
- 8. Lab lessons** – Scenarios/problems developed by Paulson Training that the students must solve while meeting certain criteria. A student will need a copy of each Lab Lesson they are to take.
 - 4 Levels of difficulty
 - Levels 1 (easiest) – 4 (hardest)