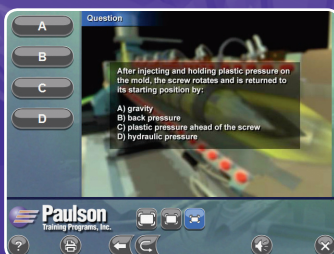
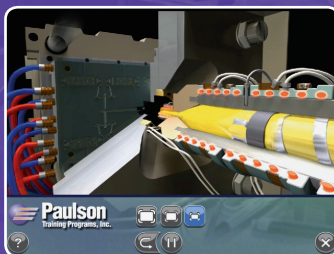
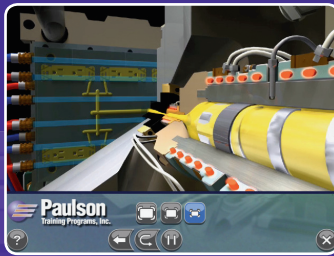
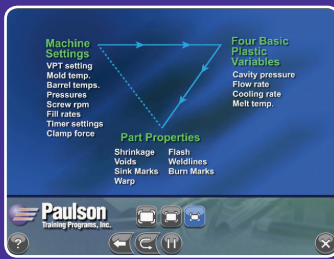


# The Technology of Injection Molding - Level Two



Paulson's fully interactive training program explains the relationship between machine controls, plastic behavior and molded part properties in full motion video, text, audio and graphic animation.

In this next level, dive deeper into the scientific approach to injection molding and the importance of understanding the effects of each machine control on the four primary injection molding variables—heat, pressure, flow and cooling, and how these variables affect part properties. This molding course assumes the student understands the effects of each machine control on the molding machine and on the plastic. In this course, we utilize SkillBuilder™, our hands-on molding machine simulator, for the first 3 lessons.

In SkillBuilder™, molding machine setups are pre-set on the control screen with various problems. The molder must adjust the machine controls and cycle the machine to solve the part defects that occur. It is highly recommended that anyone taking this course have processing molding experience on machines or have completed Paulson's The Technology of Injection Molding – Level 1 or the Paulson Plastics Academy ProMolder™ 1 seminar.

The last lesson in this course is a SimTech™ virtual molding lesson, users will have the opportunity to solve Molding Challenges with Paulson's advanced molding machine simulator SimTech™ (exclusive to Paulson). Students will be presented with a molding problem which they will need to solve and achieve the best cycle time. Who will be the best molder in your plant?

## The Technology of Injection Molding - Level 2

### Lesson 1 Pre-start, Safety, and Setup for a Mold Run

This lesson teaches optimizing pre-start, safety and process control set up procedures involved in improving injection molding machine operations. A review of the injection molding cycle from the "plastic's point of view" is done, as is the indirect relationship of the machine controls to the molded part properties. The importance of startup checks on machine protection and personnel safety is emphasized. Teaches the effects of the different types of plastic on the molding process, and setting the machine controls at startup. (Includes 2 SkillBuilder™ lessons)

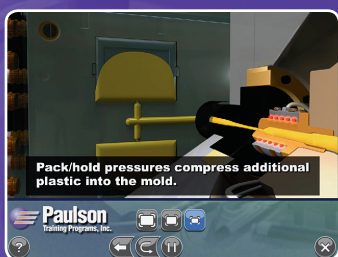
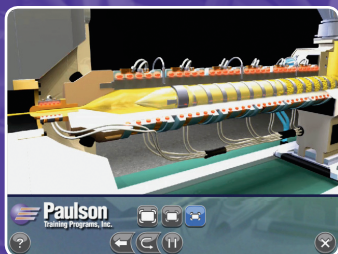
### 2 Mastering Machine Control Settings

This lesson moves on to additional machine controls and their effects on both the molded parts and overall cycle time. Students will learn how melt temperature is adjusted using barrel zone settings, screw RPM and back pressure. Next, students will learn how to measure the melt temperature and the importance of setting a proper cushion size, melt decompression, screw back distance and screw delay when necessary. (Includes 1 SkillBuilder™ lesson)

### 3 How to Achieve Maximum Productivity

In this lesson, the focus is on maximizing productivity once a stable process has been achieved. Student will also continue to learn how to adjust machine controls to solve molding problems. Adjusting fill rate to control burn marks, jetting and flash. Velocity-to-pressure transfer (VPT) to eliminate cavity pressure variations; cushion size to minimize melt temperature variations; melt decompression to minimize screw valve wear and drool. Additional controls having specific purposes and effects on the part properties including pack/hold pressures, mold closed time, ramping, and more. (Includes 4 SkillBuilder™ lessons)





## SkillBuilder Lab Lessons for Injection Molding - Level 2

- 1 Optimizing 1:  
**Optimizing Melt Temperature with a Semi-Crystalline Plastic**
- 2 Optimizing 2:  
**Optimizing Melt Temperature with an Amorphous Plastic**
- 3 Optimizing 3:  
**Optimizing Fill Time to Achieve Fastest Fill Possible**
- 4 Optimizing 4:  
**Optimizing Part Dimensions Molding an Amorphous Plastic**
- 5 Optimizing 5:  
**Optimizing Part Dimensions Molding a Semi-Crystalline Plastic**
- 6 Optimizing 6:  
**Optimizing Part Weight**
- 7 Optimizing 7:  
**Optimizing Machine Control Settings**

## SimTech™ Lab Lessons for Injection Molders



**SimTech™**—the world's most advanced injection molding simulator. In this lesson, students will log into Paulson's proprietary and exclusive molding machine simulation tool SimTech™ to apply everything they have learned up to this point. You will adjust machine controls for setup, solve problems as they occur, and minimize cycle time. This lesson bridges the gap between understanding molding as a scientific technology and applying that knowledge on the production floor. Best of all, your employees will learn how to mold parts without wasting valuable machine time and material costs! SimTech™ will revolutionize the way you train your employees.

To sign up for a hands-on-I-T system demonstration in your plant, call **1-800-826-1901.**



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