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General Description
The Pneumatics Simulation Software (LVSIM®-PNEU) from LabVolt was replaced by FluidSIM, the world's leading circuit diagram design and simulation program for pneumatics, hydraulics, and electrical engineering.

• FluidSIM

Click on the link for more information about FluidSIM (topic coverage, license options, etc.) and download a demo version.

Please note that the license option listed below are shown for information purposes only:

Features
LVSIM®-PNEU enables students to perform the following tasks using a computer:

• Install, move, and remove pneumatic components and electrical control devices.
• Modify or remove connections at any time.
• Zoom in or out to adjust the view.
• Perform flow, pressure, force, velocity and rotation speed measurements.
• Observe motor rotation as well as the extension and retraction of cylinder rods.
• Observe fluid flow inside pneumatic components.
• Save and restore equipment setups (including the virtual classroom laboratory environment).
Equipment Box Items

- The following components from the actual Pneumatics Training System are simulated in LVSIM®-PNEU:
  - Work Surface
  - Air Compressor
  - Conditioning Unit
  - Accumulator
  - Vacuum Generator
  - Directional Valve, Push-Button Operated
  - Flow Control Valve
  - Directional Valve, Double-Air-Pilot Operated
  - Directional Valve, Double-Solenoid Operated
  - Directional Valve, Single-Solenoid Operated
  - AND Function Valve
  - Shuttle Valve
  - Quick Exhaust Valve
  - Pressure Regulator
  - Single-Acting Cylinder
  - Double-Acting Cylinder
  - Bidirectional Motor
  - Air Bearing
  - Pressure Gauge
  - Flowmeter
  - DC Power Supply
  - Push-Button Station
  - Limit-Switch Assembly
  - Relay
  - Time Delay Relay / Counter
  - Pilot-Lamp Station
  - Pressure Switch
  - Magnetic Proximity Switch
  - Diffuse Reflective Photoelectric Switch
  - Loading Device
  - Tee

Computer Requirements

A currently available personal computer running under one of the following operating systems: Windows® XP, Windows® Vista, Windows® 7, and Windows® 8.

List of Available Training Systems

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<thead>
<tr>
<th>Qty</th>
<th>Description</th>
<th>Model number</th>
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<tr>
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<td>Pneumatics Simulation Software (LVSIM®-PNEU) - 1 User</td>
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**List of Manuals**

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<td>584196 (31290-00)</td>
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<tr>
<td>Pneumatics (Instructor Guide)</td>
<td>584204 (31290-10)</td>
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<tr>
<td>Industrial Pneumatic Technology (Student Manual)</td>
<td>584207 (31290-80)</td>
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<tr>
<td>Electrical Control of Pneumatic Systems (Student Manual)</td>
<td>584208 (31300-00)</td>
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<td>Pneumatics Simulation Software (LVSIM®-PNEU) (Manuals on CD-ROM)</td>
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<td>Virtual Laboratory and Equipment (User Guide)</td>
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<td>Virtual Laboratory and Equipment (User Guide)</td>
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**Table of Contents of the Manual(s)**

**Pneumatics Fundamentals (Student Manual) (584196 (31290-00))**

- 1-1 Familiarization with the Lab-Volt Pneumatics Trainer
- 1-2 Introduction to Pneumatics
- 1-3 Air Conditioning and Distributing Equipment
- 2-1 Pressure vs Force Relationship
- 2-2 Pressure vs Volume Relationship
- 2-3 Pressure Drop vs Flow Relationship
- 2-4 Vacuum Generation
- 3-1 Directional Control Valves
- 3-2 Directional and Speed Control of Cylinders
- 3-3 Cylinders in Series
- 3-4 Cylinders in Parallel
• 4-1 Indirect Control Using Pilot-Operated Valves
• 4-2 Pneumatic Motor Circuits
• 4-3 Pneumatic Motor Performance

Electrical Control of Pneumatic Systems (Student Manual) (584208 (31300-00))
• 1-1 Familiarization with the Equipment
• 2-1 Basic Electricity
• 2-2 Ladder Diagrams
• 2-3 Basic Electrically Controlled Pneumatic Circuits
• 2-4 Basic AND and OR Logic Function Circuits
• 3-1 Basic Memory and Priority Electropneumatic Circuits
• 3-2 Multi-Pressure Systems
• 3-3 Sequencing Pneumatic Circuits
• 3-4 Time-Delay Electropneumatic Applications
• 4-1 Pneumatic Actuator Deceleration Circuits
• 4-2 Counting of Actuator Cycles
• 4-3 Industrial Drilling System and Safety Circuits
• 4-4 Garbage Compactor Simulation Circuit
• 5-1 Troubleshooting Electrical Control Circuits
• 5-2 Troubleshooting Electrically Controlled Pneumatic Systems
Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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**Festo Didactic SE**

Rechbergstrasse 3  
73770 Denkendorf  
Germany  
P. +49(0)711/3467-0  
F. +49(0)711/347-54-88500

**Festo Didactic Inc.**

607 Industrial Way West  
Eatontown, NJ 07724  
United States  
P. +1-732-938-2000  
F. +1-732-774-8573

**Festo Didactic Ltée/Ltd**

675 rue du Carbone  
Québec QC G2N 2K7  
Canada  
P. +1-418-849-1000  
F. +1-418-849-1666

www.labvolt.com  
www.festo-didactic.com