

# Hydraulics and Pneumatics Simulation Software (LVSIM<sup>®</sup>-HYD & PNEU) - 25 Users 588062 (6387-E0)



**LabVolt Series**

Datasheet

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## General Description

The Hydraulics and Pneumatics Simulation Software (LVSIM®-HYD & 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:

## List of Manuals

Description	Manual number
Hydraulics Fundamentals (Student Manual) _____	584154 (30794-00)
Hydraulics Fundamentals (Instructor Guide) _____	584161 (30794-10)
Industrial Hydraulic Technology (Student Manual) _____	584164 (30794-80)
Electrical Control of Hydraulic Systems (Student Manual) _____	584188 (31228-00)
Hydraulics Simulation Software (LVSIM®-HYD) (Manuals on CD-ROM) _____	584191 (31228-A0)
Pneumatics Fundamentals (Student Manual) _____	584196 (31290-00)
Pneumatics (Instructor Guide) _____	584204 (31290-10)
Industrial Pneumatic Technology (Student Manual) _____	584207 (31290-80)
Electrical Control of Pneumatic Systems (Student Manual) _____	584208 (31300-00)
Pneumatics Simulation Software (LVSIM®-PNEU) (Manuals on CD-ROM) _____	584211 (31300-A0)
Virtual Laboratory and Equipment (User Guide) _____	584261 (32359-E0)
Hydraulics Fundamentals (Student Manual) _____	590614 (30794-00)
Hydraulics (Instructor Guide) _____	590617 (30794-10)
Electrical Control of Hydraulic Systems (Student Manual) _____	590651 (31228-00)
Pneumatics Fundamentals (Student Manual) _____	590654 (31290-00)
Pneumatics (Instructor Guide) _____	590657 (31290-10)
Electrical Control of Pneumatic Systems (Student Manual) _____	590660 (31300-00)
Virtual Laboratory and Equipment (User Guide) _____	590708 (32359-E0)

## Table of Contents of the Manual(s)

### Hydraulics Fundamentals (Student Manual) (584154 (30794-00))

- 1-1 Familiarization with the Hydraulics Trainer
- 1-2 Demonstration of Hydraulic Power
- 2-1 Pressure Limitation
- 2-2 Pressure and Force
- 2-3 Flow Rate and Velocity

- 2-4 Work and Power
- 3-1 Cylinder Control
- 3-2 Cylinders in Series
- 3-3 Cylinders in Parallel
- 3-4 Regenerative Circuits
- 4-1 Accumulators
- 4-2 Hydraulic Motor Circuits
- 4-3 Pressure Reducing Valves
- 4-4 Remotely Controlled Pressure Relief Valves
- 5-1 Hydraulic Pumps
- 5-2 Directional Valve Testing
- 5-3 Flowmeter Accuracy
- 5-4 Effects of Temperature on System Operation

#### **Electrical Control of Hydraulic Systems (Student Manual) (584188 (31228-00))**

- 1-1 Familiarization with the Equipment
- 2-1 Basic Electricity
- 2-2 Ladder Diagrams
- 2-3 Basic Electrically Controlled Hydraulic System
- 3-1 Hydraulic Sequencing of Cylinders
- 3-2 Electrical Sequencing of Cylinders
- 3-3 Speed Regulation and Braking of Hydraulic Motors
- 3-4 Continuous Reciprocation with Dwell Period
- 4-1 Drilling System
- 4-2 Safety Circuits
- 4-3 Counting of Actuator Cycles
- 4-4 Multi-Pressure System
- 4-5 Rapid Traverse-Slow Feed System
- 5-1 Troubleshooting Electrical Control Circuits
- 5-2 Troubleshooting Electrically Controlled Hydraulic Systems

#### **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](http://www.labvolt.com)

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