

Learning Systems

Software Simulation



FESTO

EasyVeep

PLC controls and
technology training

FluidSIM®

Fluid Power training aid
for instructors and design
tool for engineers

COSIMIR® PLC

3D simulation tool for
practical PLC training

COSIMIR® for Robotics

3D simulation software for
modeling and programming
robotic workcells.

**Create an Effective
Learning Environment**

www.festo.com/uslearningsystems

EasyVeep

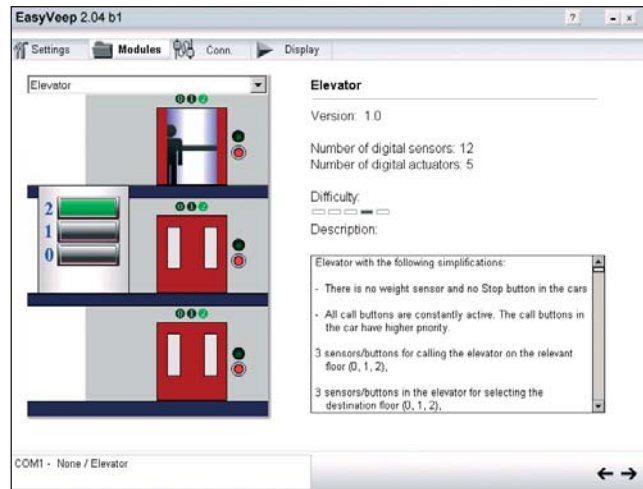
EasyVeep is a graphical, 2D process simulation software program for teaching PLC controls and technology.

Various process models can be activated to teach PLC control utilizing your PC.

In addition, interface with external hardware can be accomplished utilizing Festo's EasyPort to connect your PC to your choice of hardware.

EasyPort is an optional interface device that connects Festo software simulations to external training hardware.

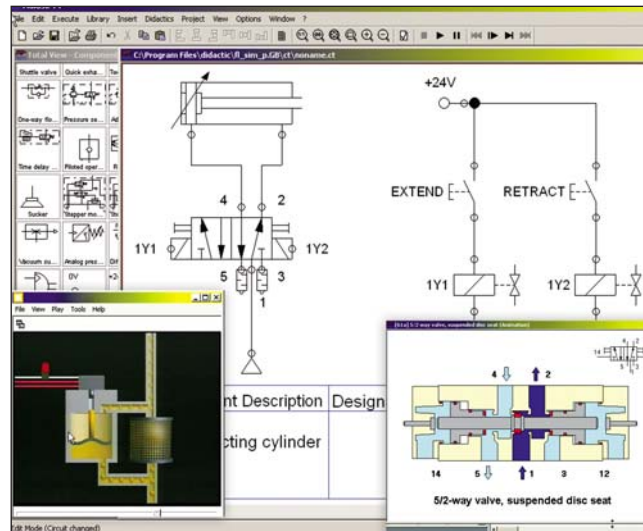
EasyVeep is available, free of charge from Festo at www.easyveep.com



FluidSIM®

Use this software as a training aid for basic fluid power. It can also be used for experimentation and as a CAD system for designing and simulating fluid power circuits.

- Features cutaway drawings and animations to aid in understanding fluid power concepts
- Instructor can create customized presentations utilizing embedded animations and drawings
- Fluid power circuits can be created and simulated using symbols easily selected from a library of components
- FluidSIM can also be used for engineering design as well as fluid power training



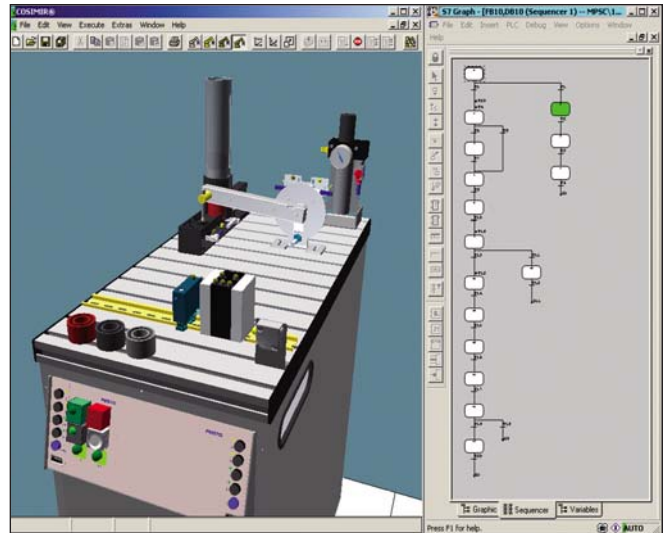
Through Virtual Reality

COSIMIR® PLC

A PC-based 3-dimensional simulation system featuring various industrial processes designed as a training aid for industrial automation classes.

- Students can simulate and control individual production processes
- Errors in student programs can be found without physically building any projects
- Instructors can introduce realistic faults in the simulation to sharpen student's troubleshooting skills
- Exercises involving sequence of operations are included
- Optional EasyPort accessory allows software to interface with external training hardware

An embedded logic device can control simulated processes including sorting, pick and place, testing and processing with a rotary index table.

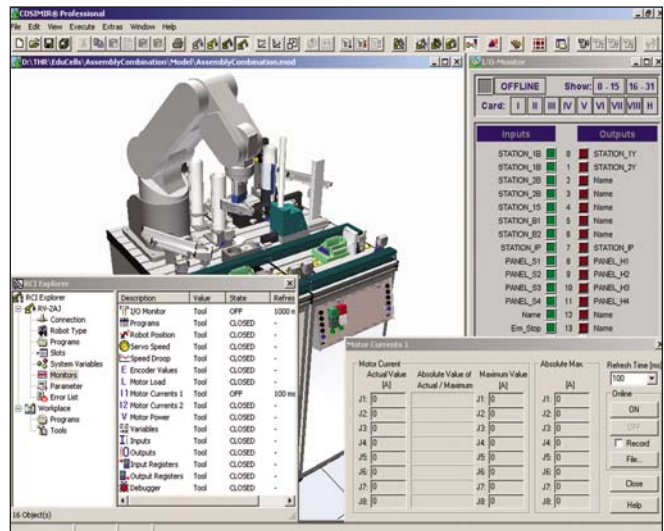


COSIMIR® for Robotics

A suite of software programs that enable modeling, programming and simulation of robot workcells.

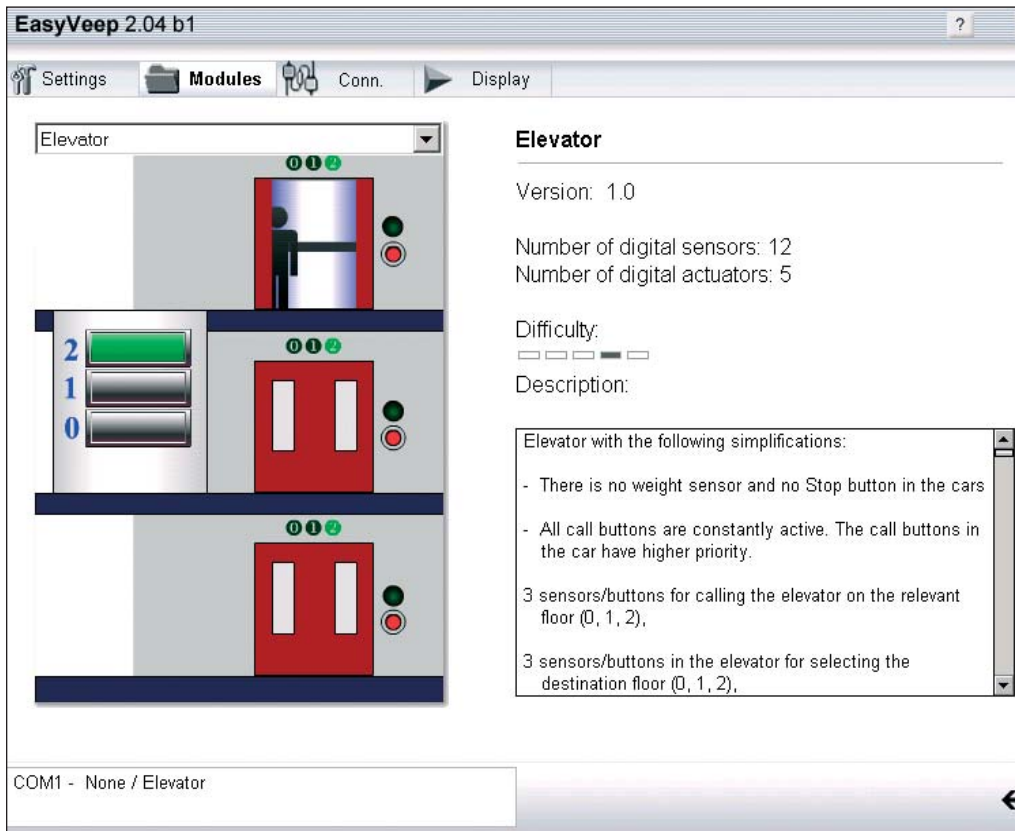
3 programs available:

- **COSIMIR Robotics** - Introduce students to robotic technology utilizing pre-designed workcells
- **COSIMIR Industrial** - Design, construct and program robotic workcells simulating a single Mitsubishi robot
- **COSIMIR Professional** - Design, construct and program multiple-robot workcells containing robots of various manufacturers



Contact your local Festo representative for a customized quotation.

EasyVeep and EasyPort



EasyVeep is available, free of charge from Festo at www.easyveep.com



EasyVeep

EasyVeep is a graphical, 2D process simulation software program for teaching PLC controls technology.

Various process models can be activated to teach PLC control on your PC. They provide realistic exercises to challenge and teach students the basics of PLC controls technology. More than 20 simulated exercises are available, including:

- a railroad crossing
- a multi-level parking garage
- a sorting system
- a canal lock system
- an elevator
- a washing machine
- a seven segment display
- a garage door

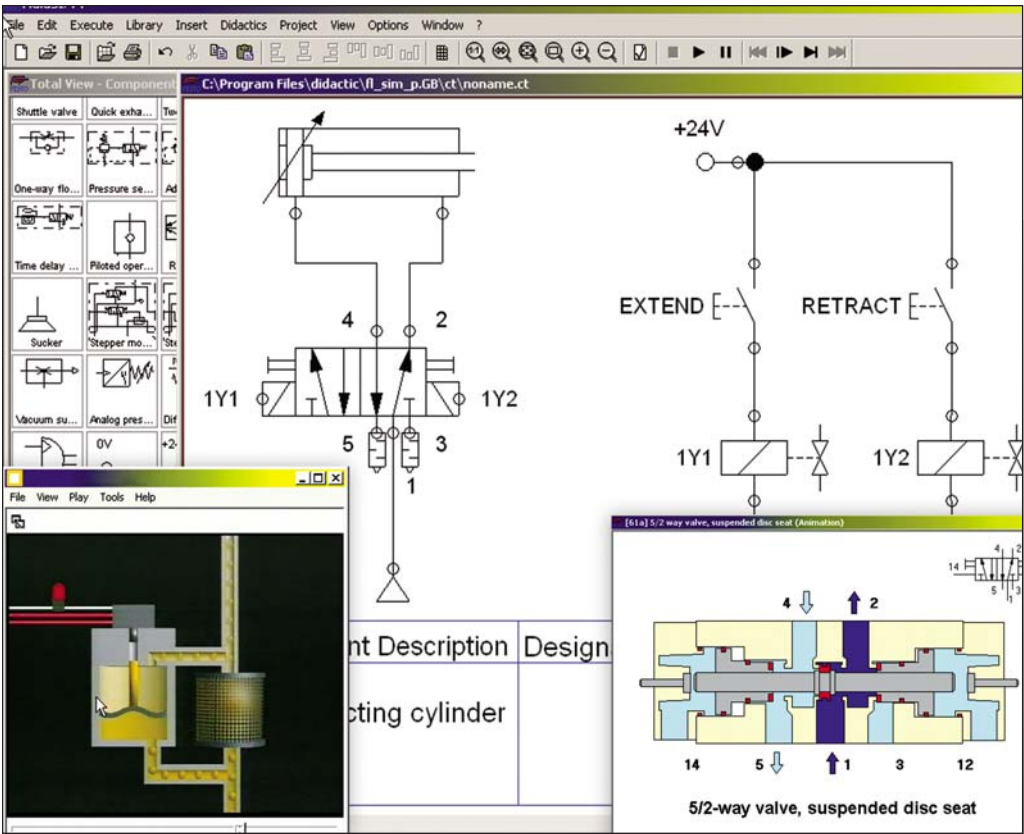
EasyPort

EasyPort is an optional accessory that allows Festo software to interface with external training hardware:

- Embedded software controllers can drive external devices
- External PLCs can control virtual hardware
- EasyPort connects your PC-based simulation software to your external training hardware via the serial port of your computer

DDE interface allows EasyVeep to communicate with real components utilizing Festo's EasyPort, with serial or USB connections; no special interface cards are required.

And, PLC's utilizing 24V DC inputs and outputs from various suppliers can be used including Festo, Allen Bradley, Siemens or Mitsubishi with EasyPort.



Licensing Options:

- Individual licenses
- Network license

With FluidSIM, instructors can create customized presentations incorporating any combination of animations, virtual cutaways or PowerPoint® presentations.

FluidSIM

FluidSIM is a software package designed for pneumatics or hydraulics instruction. It can also be used to design and test virtual circuits.

Training resources include:

- Pneumatics
- Electro-pneumatics
- Circuit drawing and interpretation
- Programmable Logic Controllers

Unique visual features contain 13 video segments featuring industrial uses of fluid power, including:

- Fundamentals of fluid power
- Signals, sensors, pressure switches and relays
- Solenoid valves
- Pilot control

FluidSIM contains cutaway drawings and animations of:

- Valves, cylinders and flow control devices
- Single and double acting cylinders
- Linear and rotary actuators
- Memory circuits

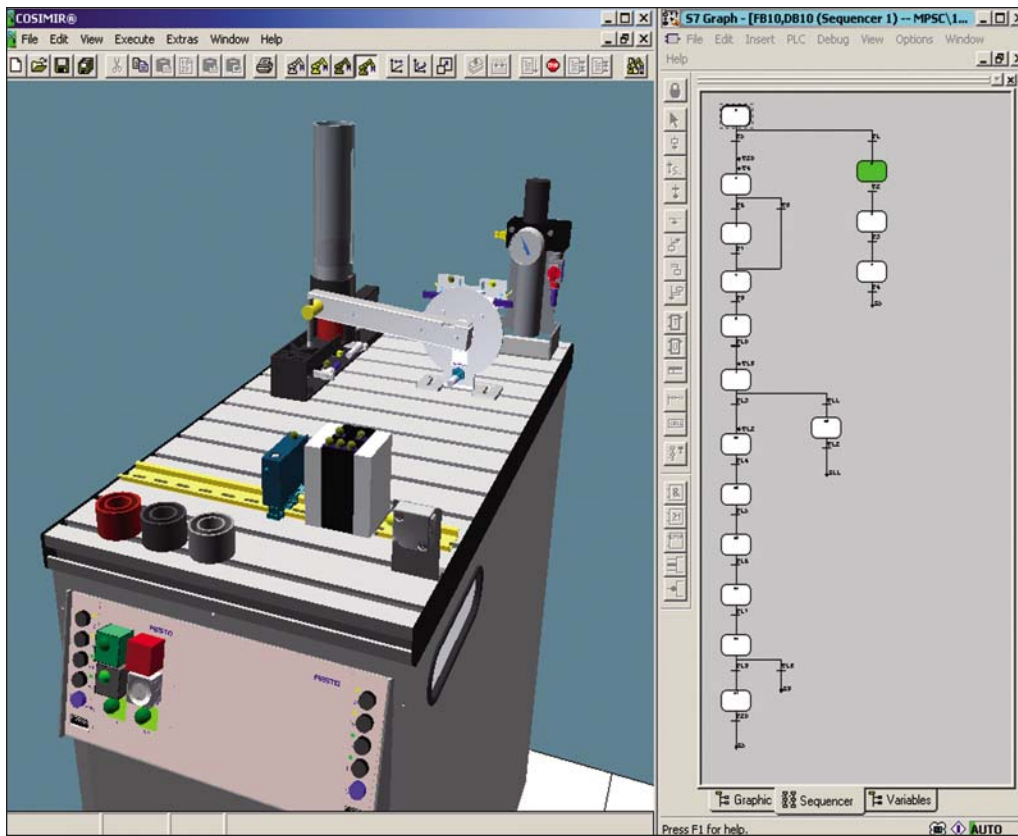
Operational features:

- Circuit schematics can be exported to CAD programs as .dxf files
- An extensive library of ISO 1219 symbols for fluid power and electrical control components
- Easy drag and drop feature allowing simple drawing of fluid power circuits
- Bore and stroke of actuators can be dimensioned
- Valves can be configured for manual, electrical, mechanical or fluid actuation

Operational features continued:

- Show cylinder velocities, system pressures and flow rates
- Easy to link various components together via labeling
- Electrical ladder diagram and circuit schematics can appear on the same drawing
- Demonstrate ladder logic using included control elements
- Automatically generate motion and control diagram and parts list
- A virtual controller featuring function block programming

COSIMIR® PLC



Licensing Options:

- Individual licenses
- Network license

MPS® is the Festo Modular Production System used in Mechatronics Training

COSIMIR PLC

COSIMIR PLC contains models of automated industrial processes. These models can respond to an embedded Programmable Logic Controller, external logic circuits or an external PLC. (External connections require an EasyPort connector).

COSIMIR PLC allows students to test their PLC programs on computer simulations of actual machinery. Finding errors in programs can be accomplished without damaging expensive equipment.

Simulated processes:

- Introduce principles of industrial automation
- Expose students to coordinated motion control and sequences of operation
- Analyze efficiencies of automated motion
- Establish necessary instructions to complete the process
- Provide feedback of process completion
- Initiate subsequent steps in the sequence

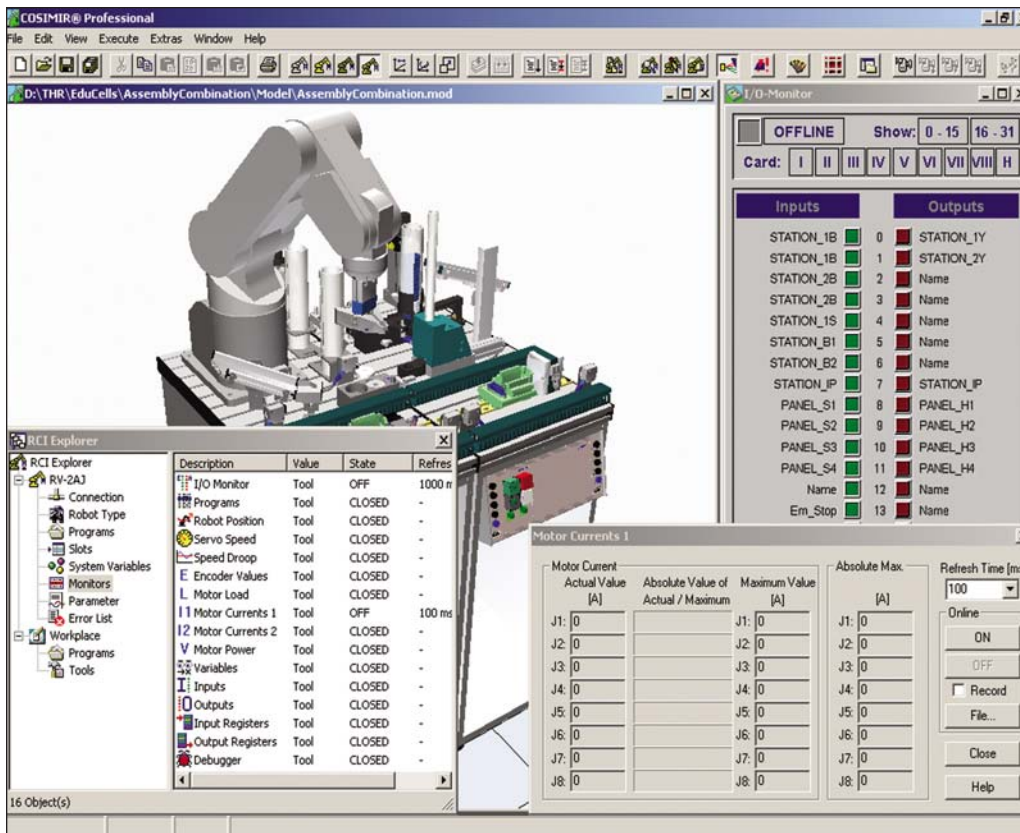
Operational features:

- Pre-designed models for your PLC to control
- Actual machine models, instead of indicator lamps, illustrate sequence of operations
- Simulated motion of industrial components
- Software models that represent the Festo Modular Production System (MPS®) line of Mechatronics training equipment

Sharpen troubleshooting skills with these standard features:

- Instructor can install faults in the pneumatic, electrical or sensor systems
- Student's troubleshooting steps are recorded and can be reviewed by the instructor
- Student's are encouraged to analyze the sequence of operations

COSIMIR® for Robotics



Licensing Options:

- Individual licenses
- Network license

COSIMIR® software is the leading software for interfacing with Mitsubishi robots.

COSIMIR: Three Programs Available

COSIMIR Robotics

COSIMIR Robotics is a low-cost introduction to robotics technology that features 15 virtual robotic workcells; complexity increases from a single robot to an entire factory simulation. Programs and position lists can be saved for future use.

Workcells include:

- Pick and place
- Packaging
- Painting
- Assembly
- Medical lab automation

Illustrates robotic concepts:

- Classification of robots
- Robotic applications
- Sensors and effectors
- Structure & programming of robots

Robotic concepts glossary:

- Axis of rotation
- Coordinate systems
- Degrees of freedom
- Kinematics
- Tool Center Points

COSIMIR Industrial

COSIMIR Industrial allows you to directly program a Mitsubishi robot.

- Designed to control an individual Mitsubishi robot
- Single robot workcells can be designed and stored.
- Programs and position lists can be exported to an actual Mitsubishi robot

COSIMIR Professional

COSIMIR Professional allows you to directly program multiple robots.

- Supports industrial robots such as ABB, Fanuc, Mitsubishi, Kuka, Staubli and Kawasaki
- Model Explorer feature permits selection of robots from various manufacturers
- Design and store multi-robot workcells, including conveyors and machinery
- Entire workcell can be exported to external CAD programs
- Robot programs and position lists can be exported to actual robots.

Learning Systems Software Simulation

Festo Software Systems seamlessly integrate with:



Learning Systems Modular Production Systems

- Teach Industrial Automation using actual factory processes
- PLCs control working factory models
- Use actual industrial components



MPS® won the Worldidac Award in 1998, 2000, 2002



Learning Systems Roadmap to Mechatronics

- Hardware and simulation software to teach mechatronics
- Fluid power, PLC control, robotics and sensors
- ICIM and FMS flexible manufacturing training systems



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