

A NEW WAY OF TEACHING
FLUID POWER, ELECTRICITY
AND AUTOMATION,
INCLUDING SIMULATION.

Automation **X**pert



AutomationXpert is the most advanced server based manufacturing knowledge database available for teaching and learning automation processes, hence eliminating the need for costly out dated paper or book materials.

AutomationXpert can be used (with a projection device) by the instructor on a single computer for demonstration purposes, or as a learning tool for students allowing them to research technology areas by accessing true multimedia contents on automation technologies from a computer or school network.

Available as a site license (unlimited number of seats), AutomationXpert offers you :

- A very intuitive and user friendly interface
 - Extensive content in the area of pneumatics, hydraulics and electricity
 - Simulation tools
 - Self-guided exercises
 - Access Manager and scenarios builder
 - Printing tool
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- Over 600 pages of interactive content
 - Close to 900 pictures and images
 - More than 300 animations
 - More than 1000 links inside the software

The screenshot displays two technical pages from the software. The top page, titled "Reversing Rotation on DC Motors", explains that the rotational direction of a DC motor can be reversed by inverting the polarity of its terminals. It includes a warning about protection elements (fuses, circuit breaker) and a schematic diagram of a motor with terminals K1, K2, and S1. The bottom page, titled "Asynchronous AC Motors", describes the attraction/repulsion phenomenon and shows a graph of current (i) and voltage (U) over time, along with a diagram of a motor's magnetic field.

Online at : www.automationxpert.com

Interactive animations

Through the use of our interactive multimedia, students will improve on competency levels and gain a greater understanding of automation technologies.

The screenshot shows two simulation windows. The left window is titled "Simulation of Speed Drive ATV11" and displays a motor drive unit connected to a motor, with a graph showing speed over time. The right window is titled "Simulation of Speed Drive ATV31" and shows a similar setup with a different motor and drive unit, also featuring a speed graph.

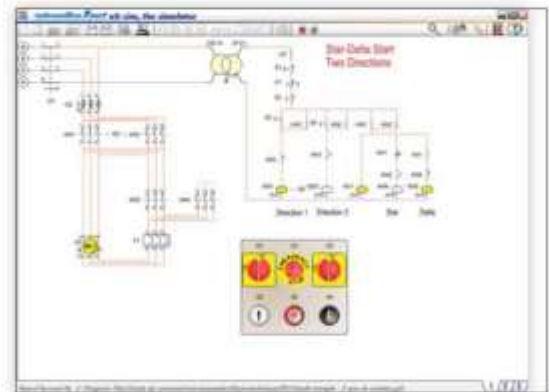
Simulation of motor drives

In addition to explaining how motor drives work, AutomationXpert offers 2 simulators, built around the Altivar 11 & 31 models from Telemecanique. This gives your students the ability to build and test different wiring layouts using their various command modes (2C, 3C, analog signals, several speeds...)

The students can decide how to set the various parameters and verify them with the help of the graph tool. These 2 simulators offer a wide choice of motors (34) and drives (6) to choose from.

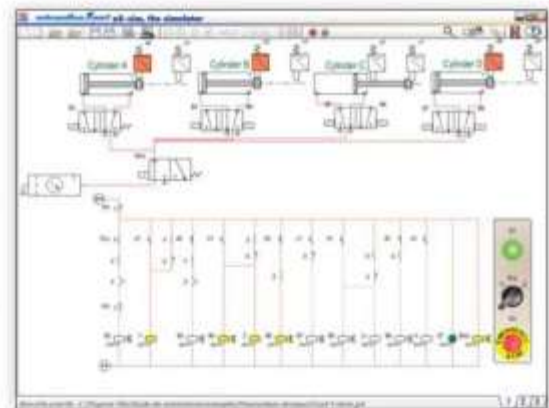
AutomationXpert includes a simulator, allowing the user to edit and simulate basic circuits including the command panel for electro-technics, electro-pneumatics and electro-hydraulics.

- Included with AutomationXpert
- User friendly
- Add comments into the circuit to enhance learning
- Numerous pre-built circuits included
- Pictures and/or animations associated to each component
- Online help available
- And much more



The most important components can be found in 5 libraries

- Pneumatics
- Hydraulics
- Electrical
- Electrotechnical
- Command Panel



Once the simulation is started, components come alive, piping and electrical wiring show flow direction movements by using different colors. The user can also dynamically change the percentage of opening and closing of the flow control valves.

Teaching Hydraulics ?

The hydraulic pack is a nice add-on (option) to AutomationXpert.

- Summary
- Theory of hydraulics
- Schematic example
- Hydraulic group
- Pumps
- Filtration
- Flow components
- Pressure components
- Blocking components
- Valves
- Motors
- Cylinders



AutomationXpert is live and updatable software! Software updates that will include additional components, more explanations and added multimedia will be available with the purchase of the optional yearly maintenance plan.

Dynamic Index and history of visits

An alphabetic index gives the user instant access to the extensive content of the software. In addition, a nice feature called "History" allows the listing of all the pages previously visited and the possibility to go back to them in few seconds.



Access Manager and scenarios builder

With this tool, the instructor can allow access to different pages by selecting the chapters and the screens that are relevant to your learning program.

In addition, the instructor can build a complete learning scenario, where the students will have to navigate through the pages in a particular order, screens and animations that will have been organized by the instructor.

Where to use it ?

AutomationXpert can be used in several programs

- Fluid Power
- Electricity
- Automation
- Mechanical Engineering Technology
- Electrical Engineering Technology



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