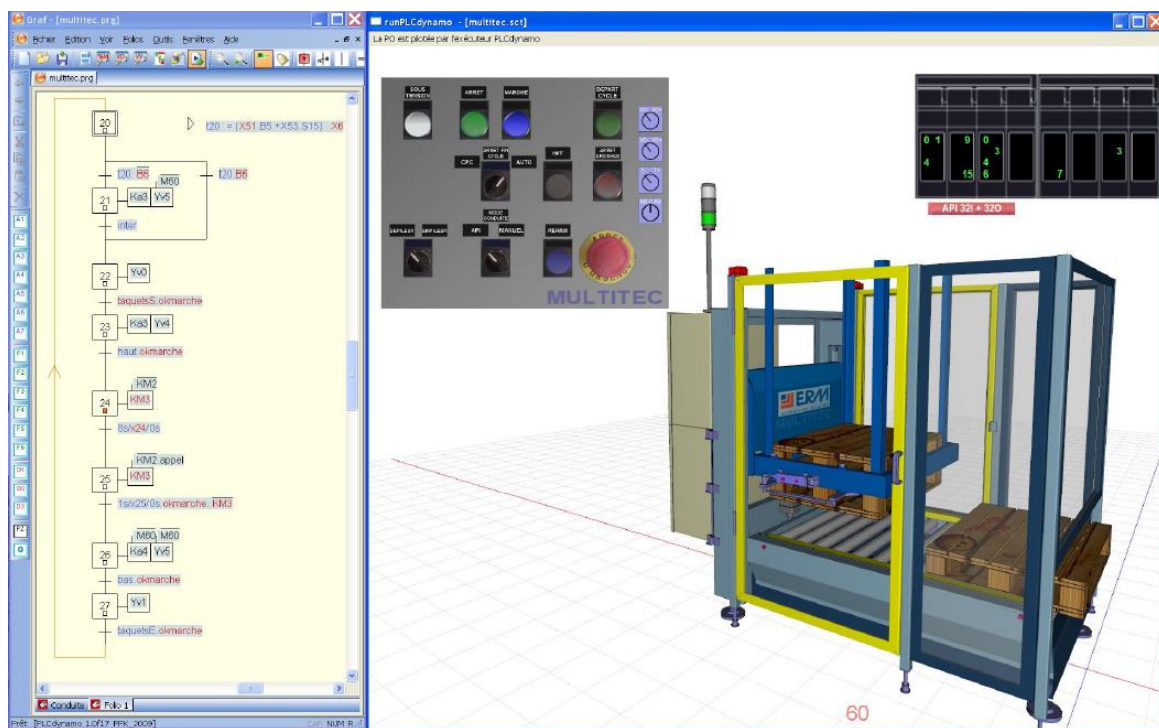# Multitec programmable digital mock-up
3D Dynamic Simulator of the Multitec System (Pallet Stacker / Unstacker)

ErmaFlex #10s

**Professional Training
and Technological
High schools, training centres,
Universities and Engineering Schools**

Educational platform for realistic simulation

In addition to the real system, the Virtual Operating Part (VOP) of ERM's MULTITEC offers a realistic simulation teaching platform that works autonomously or in a mode connected to a PLC.

Learning of automation techniques

The hyper realism of the 3D graphic animations of the simulated PBR, whose geometry is derived from CAD tools (SolidWorks), allows the learner to approach the learning of the different phases of an automation project:
• design (integrated Grafcet and GEMMA* editors),
• the programming of the PLC,
• testing and commissioning,
• the control of the system (control panel),
• maintenance (possibility of creating breakdowns),
this in complete safety for him and without risk of material damage.

Easier discovery of the real system

✓ In addition, the MULTITEC Virtual Operating Part encourages the user to get to grips with the real system and to discover the technologies used thanks to the integrated TP manager which allows the teacher to easily associate hypertext links to all types of external files (PDF documents, Word, sounds, videos, photos, etc.) or applications (API programming software, etc.) with the objects in the 3D scene

✓ Thus, the user has the possibility of easily accessing numerous educational resources by putting him/her in a situation of discovery (inductive approach).

More information on www.erm-automatismes.com
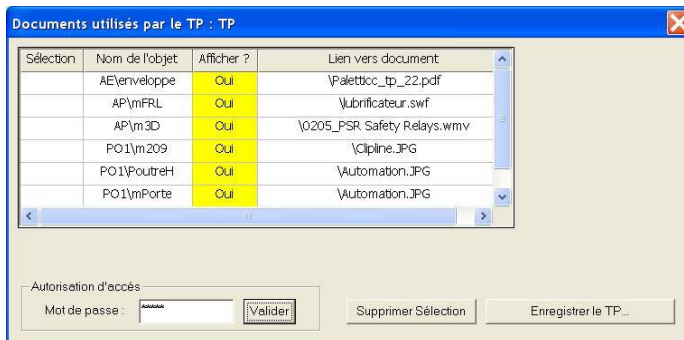
Operation

## Faithful representation of the Multitec

The simulated Virtual Operating Environment is a faithful representation of the real-time electrical and dynamic behaviour of the Multitec system including its sensors, actuators and control panel.

Programming with virtual or real PLC

✓ The objective for the learner is to program the control part of the system using either the virtual PLC built into the PBR or a PLC connected to the computer.

✓ Information is then exchanged between the POD and the PLC via an Ethernet link in Modbus TCP/IP protocol.

Main features

✓ True to life 3D graphic representation,
✓ Realistic real-time dynamic behaviours,
✓ Full interactivity with the Virtual Operating Part,
✓ Interactive virtual control panel,
✓ GRAFCET editor in accordance with IEC 60848,
✓ Editor of GEMMA*,
✓ Dynamic visualisation of the status of pre-actuators in control cabinets,
✓ Dynamic visualization of inputs/outputs,
✓ TP manager (hypertext links from the 3D scene),
✓ Available as an **establishment licence**,
✓   Connection to PHOENIX CONTACT and Schneider Electric TSX Premium and M340 PLCs via Ethernet link - Modbus TCP/IP protocol,
✓ Connection to the PLC simulator of the Schneider Electric UNITY PRO XL software suite,
✓ Connection to AUTOMGEN software via its Modbus TCP/IP client

API 32I + 16O + 2AI

Dynamic visualization of Inputs/Outputs

Phœnix Contact ILC   Schneider Electric TSX Premium   Schneider Electric M340
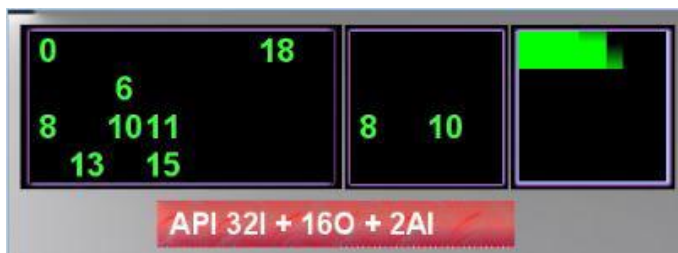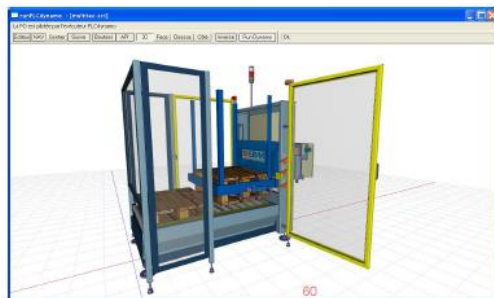
Initial or continuing training courses with automation as part of the curriculum

In France:
• 2nd year SI
• IS Speciality
• Bac STI2D
• Bac Pro MSPC
• BTS MS
• BTS CRSA
• BTS Electrotechnics
• IUT Departments GMP, GIM, OGP, GEII
• Engineering schools, universities
• AFPA Centres
• AFPI - CFAI

Hardware and software requirements

✓ Microcomputer with Core2 Duo processor at 3 Ghz
✓ NVIDIA 7600 GT graphics card or equivalent
✓ Memory: 2 GB RAM minimum
✓ Disk space required: 50 MB
✓ CD Rom players
✓ MicroSoft WINDOWS XP or Vista

Reference

MN10

561, allée Bellecour - 84200 Carpentras - France - Tel + 33 (0) 4 90 60 05 68
www.erm-automatismes.com - contact@erm-automatismes.com

2