

Towards greater efficiency with industry-oriented training and consulting

New learning systems support process optimisation

Industrial mechanics, electricians and mechatronics experts all share one aspect of vocational training: they must master the fundamentals of electrical engineering. At the 2011 Hanover Trade Fair, Festo Didactic is presenting the latest educational trends and learning systems such as the TP 1011 electrical engineering training unit, the recipient of the "iF product design award 2011". These systems provide opportunities for efficient industry-oriented training at companies and universities. Simulation games such as the Synchro Game from the Training and Consulting sector show how processes in production or administration can be improved, thus bringing about savings in terms of costs, time and energy. Targeted seminars on the topic of "Energy Saving" sensitise the market in terms of cost and energy efficiency.

Learning systems such as Learnline, the mobile extended system Robotino® XT and the new TP 1011 electrical engineering training unit – the recipient of the "iF product design award 2011" – teach prospective mechatronics experts and engineers the basic principles of electrical engineering.

Award-winning equipment set for electrical engineering fundamentals

The design quality, functionality and ergonomics of the TP 1011 equipment set for the fundamentals of electrical engineering and electronics convinced the "IF product design award" selection committee. The balanced combination of these aspects makes for convincing solutions with high utility and recognition value, which is why this equipment set from Festo Didactic has been chosen for the "IF product design award 2011".

Robotino® XT: Learning system flexibly extended

The high level of flexibility and efficiency that can be attained by modern learning systems is demonstrated by Robotino®, which is already being used at many universities and vocational training schools. In the Robotino® XT model, mobile robot applications have been extended with a compact version of the Bionic Handling Assistant; the robot can thus not only manoeuvre in cramped spaces, but can also move flexibly and extend its adaptive gripper with high precision.

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Its yielding nature makes for safe human-machine cooperation and opens up entirely new opportunities for extending the scope of human activity. At the same time, costs and energy consumption are reduced by Robotino® XT's lightweight construction and low-pressure pneumatics, which in turn are a result of its generative production method that dispenses with die casting tools, and the use of pumps over a pressure range from 0.3 to 2.5 bar.

As a modular learning system, Robotino® from Festo Didactic has also proven its superiority in a contest. In the Festo Logistic Competition as part of the RoboCup university challenge, it gives participants the opportunity to learn and to further develop complex and interesting challenges in the field of robotics. The mobile robotic system will be making a further appearance in July 2011, in the final elimination round of the RoboCup in Istanbul.

The practical application of Robotino® is simulated by e-learning systems such as Robotino® SIM and the 3D simulation system CIROS. Programming a mobile robot with sensors, camera and Omnidrive on a PC – in other words in a virtual learning environment – has never been as easy and motivating as with Robotino® SIM. The use of Robotino® can thus be tested in virtual reality.

Simulation games and seminars illustrate savings potential

With programs such as Synchro Game, Festo Didactic is also showing its customers the potential for rapid, robust production processes and flexibility. Using the example of a production process, the simulation game demonstrates to participants how deliveries can be efficiently managed and productivity increased.

In this game, the participants are required to create a production line; their objective is to generate products, meet customer demands and deliver on time. Each participant assumes a different role. On conclusion of the first round, the processes and results are jointly analysed. Solutions are then devised for process optimisation. The end result is a cost-effective, rapid, energy-saving production process.

While this simulation game requires only minimum investment in materials, the result ensures maximum savings in terms of costs, time and energy.



In addition to games such as the Synchro Game, Festo Didactic also offers targeted training courses, consulting and seminars on the topic of energy efficiency. Together with customers or employees, Festo Didactic focuses here on matters such as the economical use of pneumatics.

Under the motto of "Energy Saving", participants in the seminar become more aware of leakages and of the calculation of costs incurred; at the same time, their consciousness for the proper treatment of costs is sharpened. In addition, drive systems technologies are compared according to technical, economical and safety-relevant criteria, and potential for optimisation of pneumatic and electrical systems is identified. Festo Didactic thus enhances the market's awareness in matters of cost and energy efficiency.

Please refer to: Festo press photo CC_12_11_EquipmentSet.tif



Caption to illustration: The TP 1011 equipment set from Festo was chosen for the

"iF product design award 2011".

Please refer to: Festo press photos

CC_12_11_Robotino1.tif

CC_12_11_Robotino2.tif



Caption to illustration: In the Robotino® XT model, the Robotino® mobile robot

> application has been extended to incorporate a compact version of the Bionic Handling Assistant; as well as manoeuvring in cramped spaces, it can also move flexibly and extend its adaptive gripper with high precision.

Please refer to: Festo press photos

> CC_12_11_SynchroGame1.tif CC_12_11_SynchroGame2.tif

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Caption to illustration:

With programs such as Synchro Game, Festo Didactic is also showing its customers the potential for rapid, robust production processes and for flexibility. Using the example of a production process, this simulation game demonstrates to participants how deliveries can be efficiently managed and productivity increased.

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