PID

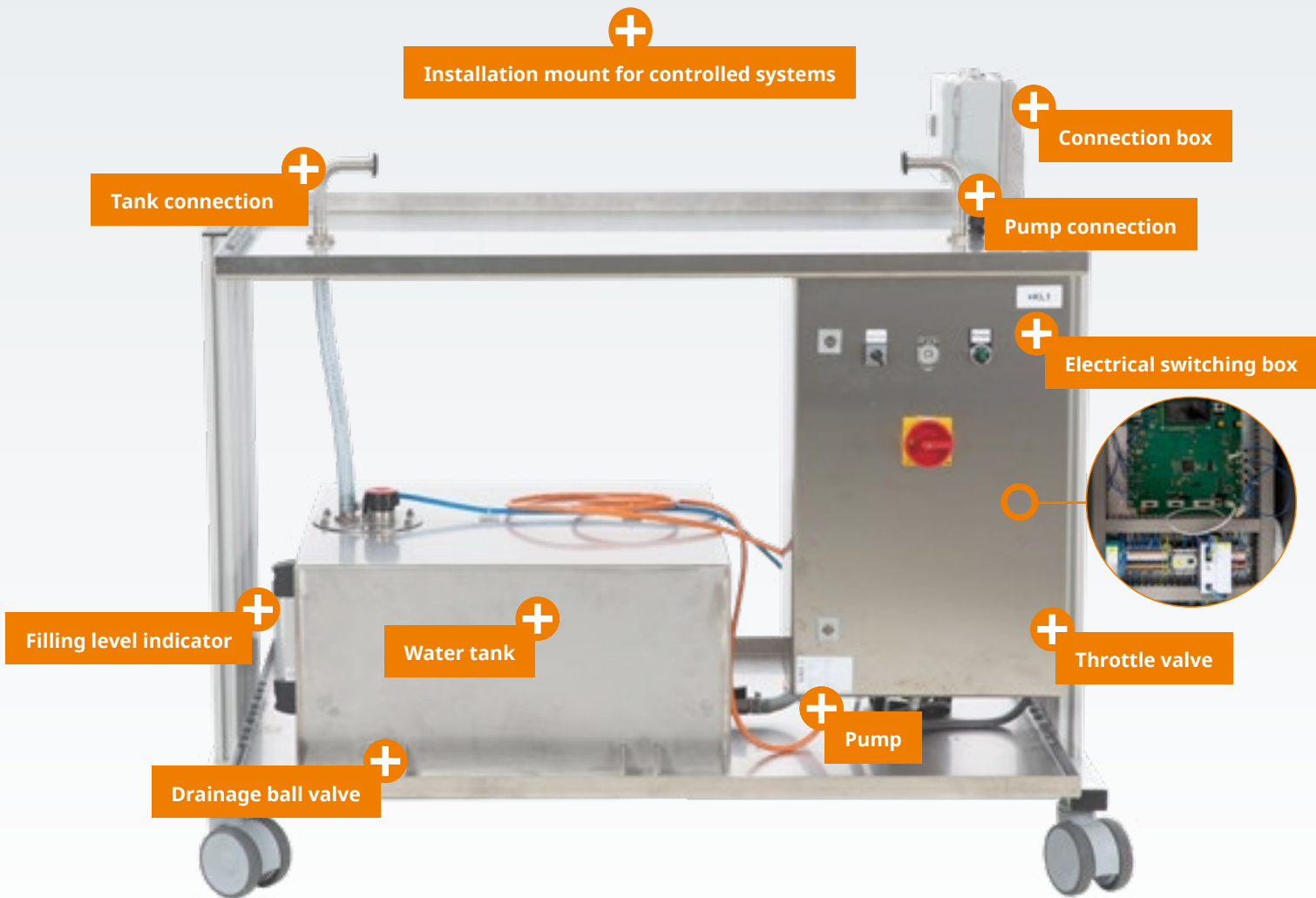# PROCESS CONTROL TRAINER

The modular system: learning in close proximity to industry

PROCESS CONTROL TRAINER

Installation mount for controlled systems

Connection box

Tank connection

Pump connection

Electrical switching box

Filling level indicator

Water tank

Throttle valve

Drainage ball valve

Pump

The automatic control of critical process variables forms the foundation of good training in technical professions. Using the modular process control trainer from Lucas-Nuelle, the elementary principles of automatic control engineering can be clearly and visually conveyed.

To ensure that the instruction of the training content is extremely hands-on and authentic, Lucas-Nuelle only uses standard industrial components. This approach provides a boost to the visual appeal of every automatic control laboratory and also added value to the training itself.

THE MODULAR SYSTEM:
LEARNING IN CLOSE PROXIMITY TO INDUSTRY

The system is accompanied by a digital LabSoft course.

PCT 11 Flow rate

PCT 12 Pressure

PCT 13 Filling level and temperature

Lucas-Nuelle counts on future-proof systems. By creating a modular and extremely flexible system, additional controlled systems can easily be integrated. More controlled systems are already in development now so that future diverse topic areas can be covered with a single basic equipment set.

Because of the sturdy industrial components used, the Lucas-Nuelle Process Control Trainer will be a long-lasting asset in any automatic control laboratory. Thanks to its modularity and its capacity for the rapid swapping out of controlled systems under investigation, it contributes to the modern-day need for shortened practicals and is oriented towards meeting our customers' requirements.

INTERACTIVE LEARNING PLATFORM
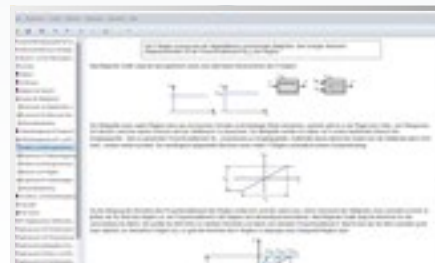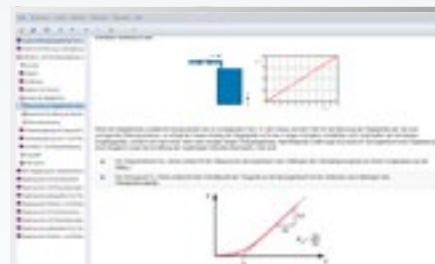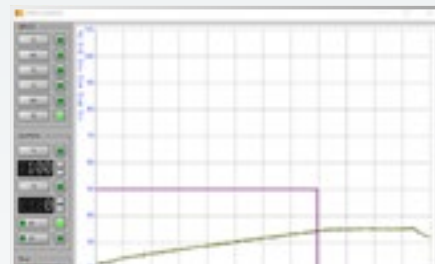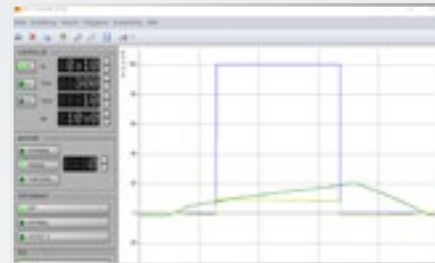
The students are guided into respective topics of the interactive learning platform and supported in their assignments. With the aid of virtual instruments, the various controllers can be operated and monitored via the PC. Thanks to particularly application-friendly developers, the operating interface has been optimized so that the user can focus on the essentials.

With the newly developed data logger, the data can be processed on the PC and then exported to other applications, thus permitting multi-purpose utilization of the controlled system.

PCT 11 FLOW RATE

The automatic control of the flow rate is an essential and very significant process, and not only within chemical process engineering. It constitutes the basis of every process and is practically indispensable.

With the Lucas-Nuelle Flow-rate Process Control Trainer, commercially available industrial components are used to assemble an authentic controlled system operated hands-on to explore the essence of flow-rate measurement.

Training contents
- Assemble and put into operation an automatic flow-rate control system
- Operating principle and response of an automatic flow-rate control system
- PI- and PID-control using an industrial controller
- Automatic control using a training controller
- Comparing industrial and training controllers
- Recording characteristic curves

Order no. CO3610-2F

PCT 12 PRESSURE

Pressure is one of the most complicated variables found in closed-loop control systems and is an essential aspect of industrial processing. With the Lucas-Nuelle Pressure Process Control Trainer, the basics are mastered for a fundamental understanding of this automatic control system.

Training contents
- Assemble and put into operation an automatic pressure control system
- Operating principle and response of an automatic pressure control system
- PI- and PID-control using an industrial controller
- Automatic control using a training controller
- Comparing industrial and training controllers
- Recording characteristic curves

Order no. CO3610-2H

PCT 13 FILLING LEVEL AND TEMPERATURE

Although an automatic filling level control system is one of the slowest control loops, this does not mean it is any less complicated. With the LN Process Control Trainer, a variety of scenarios can be implemented in closed-loop filling level control, providing a solid foundation for students and trainees. Closed-loop temperature control is considered separately and demonstrates how challenging this type of control can be to carry out in practice.

Training contents

- Assemble and put into operation of an automatic filling level control system
- Operating principle and response of an automatic filling level control system
- Operating principle and response of an automatic temperature control system
- PI and PID control using an industrial controller
- Automatic control using a training controller (only filling level)
- Comparing industrial and training controllers
- Recording characteristic curves

Order no. CO3610-2G

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Process Control Trainer

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