TOX®-Automation

- TOX®-Controls
- TOX®-Process Monitoring
- TOX®softWare
Operating, Controlling and Monitoring
All processes under control

From simple, pneumatic basic controls, or electro-pneumatic controls with a number of operating options, all the way to complex, custom programmable controls with nearly unlimited possibilities: TOX® PRESSOTECHNIK is able to meet all requirements.

The controls are well thought out, easy and safe to operate and provide a maximum of functions. All TOX®- Controls meet the latest safety norms, the guidelines of the German Occupational Safety and Health Administration as well as European Directive EN 13736 for pneumatic presses.

With TOX®-Controls, you are always on the “safe side”. Only high-quality, approved and tested safety components and valves are installed.

TOX®-Controls
A big variety of controls for each application:
• 1-Hand Start
• 2-Hand Consoles
• 2-Hand Safety Controls with PLC
• Foot Pedal Controls
• External Pulse Controls

The special TOX® benefits
Reliable service worldwide:
• Comprehensive experience with different applications in different industries (automotive and supply industry, white goods industry, medical technology and many more)
• TOX® PRESSOTECHNIK is your active partner – from planning to operation of the system
• Support for commissioning and process optimization
• Training on the customer’s premises or at TOX® PRESSOTECHNIK
• Remote service
• Factory calibration and repair service
**TOX®softWare**
- Communication between the components
- Process overview and status display
- End value overview and data archiving

**TOX®-Process Monitoring**
- Clinching Monitor (type CEP)
- Pressing Monitor (type EPW)

**Optional integration of additional components**
- Light curtains
- Sensors
- Lifting and rolling doors
- …and many more!
TOX®-Controls
Safe actuation and control of work processes

Pneumatic controls
Simple basic controls to drive pneumatic and pneumohydraulic cylinders or presses without additional functions. Approved for presses with a tool opening of a maximum of 6 mm.

Electrical controls
From simple control of pneumohydraulic cylinders to complex, standardized, programmable controls with additional functions. Depending on type with integrated PLC and adjustable processes.

Pulse controls
Main directional valve and required accessories (flow controls, maintenance unit, etc.), no automatic control, control by means of an electrical impulse from the customer control.

Advantages
- Well thought-out control concepts
- Flexible modular design
- Simple operation
- Optimum cost-effectiveness
TOX®-Monitoring
Focus on the process

Production processes are getting more and more complex, as demands on quality are rising. Monitoring systems can contribute to producing consistent precision. They monitor the work processes, represent them in a user-friendly way, reliably store data and provide these for tracking with additional details on the component.

Reliable monitoring is indispensable in particular for the production of a large number of high-quality products.

TOX®-Pressing Monitors consistently monitor all processes for which accurately defined, functional connections between force and displacement must be proven. They are ideally suited to the monitoring of joining, riveting, pressing and assembly processes and ensure continuous quality control in production here.

Advantages
- Ideal monitoring of joining, riveting, press-in and assembly processes
- Up to 128 measuring programs
- Can be integrated into networks
- Process control

The Clinching monitor was specifically developed for the joining process TOX®-Clinching. It supports the complete monitoring and documenting of the quality parameters of the TOX®-Clinching process. Force sensors measure the press force during the joining process and a travel measuring system monitors compliance with the control dimension "X".

Advantages
- Force monitoring of clinching processes
- Simple operation
- Trend monitoring
- Process control
- Extendable to any number of processes
- With or without visualization
Device software and TOX®softWare
Control and archiving of complex machine processes

Sophisticated software is required for optimum control of complex machine systems. Complete control, monitoring and evaluation tasks must be possible for all applications by means of a simple and intuitive user interface. What is important here is to combine all components and allow them to communicate with each other respectively.

Pneumohydraulically driven machines
For these drives, process data can be collected by means of sensors and optional measuring systems. The software allows storage and analysis of this data and controls many other machine functions.

Electrically driven machines
The electromechanical drives are controlled by a servo controller. Here almost all machine components can be connected via bus systems and all further machine functions can thus be controlled. Therefore the use of the TOX®softWare is very helpful.

Network integration in modern production

Ingenious solutions for smooth running!
TOX®softWare
Overview of the process network

In addition to the complete control, monitoring and evaluation functions, the TOX®softWare provides an interactive work environment for all applications. The user interface provides a simple and quick project overview. Windows designed like workbooks simplify handling. Dockable windows and toolbars that can be easily adapted to user's demands increase efficiency.

Export of process data in CSV format (compatible with Microsoft Excel) is possible for the quality data management. Customer-specific data can optionally be included in the export file. This makes it possible for example to add a unique component number or barcode to the quality data.

Process curves can be stored and archived. This makes a delayed evaluation of the graphical processing sequence possible. Also the TOX®softWare provides comprehensive backup and restore functions.

Master computer
- Production monitoring
- Data storage

TOX®-Tongs with TOX®-ElectricDrive

Ethernet

SPS

Fieldbus