

TOX® FlexPress Station:

The electric press for precise joining connections

TOX® is expanding its portfolio of modular press systems with the FlexPress Station. The electrically driven platform is designed for a wide range of joining and forming processes and combines powerful drive technology with ergonomic design and continuous process monitoring. The design of the electric press allows it to be used as a manual single workstation or integrated into automated production lines.

The FlexPress Station is suitable for applications that require reproducible results, high process reliability, and flexibility in configuration. The usable press force range extends from 0.05 to 200 kilonewtons. Areas of application include clinching, press-fitting, and forming.

Modular architecture for different production requirements

The FlexPress Station combines robust C-frames and 2- and 4-column variants with TOX® ElectricDrive electromechanical servo drives. Integrated sensors record force and displacement data for precise control of the joining processes. The press is designed to be flexible and adaptable to different process requirements and production environments.

Tool modules, safety concepts, and operating elements can be configured and supplemented. This allows the station to be tailored to specific process requirements. Effortless integration into existing (automated) production lines is also possible.

Ergonomic operation and integrated safety

Ergonomics and user-friendliness were the focus when designing the workstation. Good accessibility, short setup times, and intuitive operation ensure smooth operation. The height-adjustable version allows for ergonomic working in both sitting and standing positions.

Three coordinated safety concepts are available: 2-hand start, one-hand start in combination with a light curtain, and an electrically locked safety door. The user interface with TOX® UDI Panel enables control and display of all relevant process data. Integrated LED RGBW status lighting visualizes the machine status directly in the work area.

The control cabinet is fully integrated into the press frame and can be mounted on the left or right side. This reduces the amount of cabling required and enables a particularly compact layout. Thanks to its space-saving design, the FlexPress Station is also suitable for use in production environments with limited space.

Process monitoring with Industry 4.0 connectivity

The TOX® software records force and displacement curves throughout the entire press cycle and evaluates them in real time. Deviations are displayed visually and all process data is documented. The data can be integrated into higher-level systems via standardized interfaces such as OPC UA and MQTT.

The FlexPress Station thus supports end-to-end traceability of all process steps and meets the requirements for networked production processes. Process quality remains stable even with changing components and short cycle times.

“The FlexPress Station was developed with the user in mind. We wanted to create a solution that could be adapted to any production task while remaining easy to use.”

Patricia Rundel, Product Manager for Presses & Machines

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Service for editorial offices:

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Image captions:



Image 1: The TOX® FlexPress Station electric press with two-hand start button.



Image 2: The electromechanical TOX® ElectricDrive drive technology with integrated force/displacement sensors enables precise and reproducible joining processes.

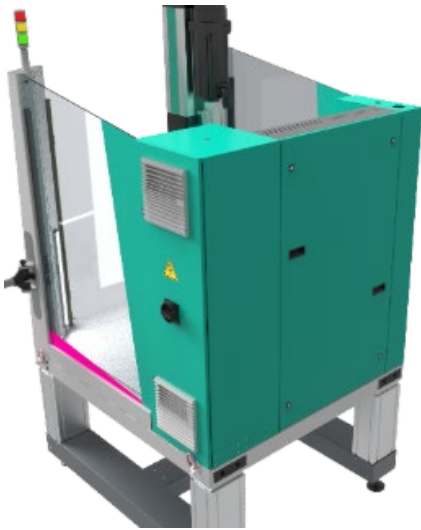


Image 3: The compact control cabinet is integrated into the rear of the press frame and offers good accessibility with a small projection thanks to its variable door opening.

Images: TOX® PRESSOTECHNIK SE & Co. KG

About the company:

TOX® is a supplier of presses, systems as well as components for sheet metal joining and assembly technology. Since its foundation in 1978, the family business has become a global player with more than 1500 employees worldwide, over 500 of which are based at the headquarters in Weingarten near Ravensburg, Germany. The success story started with one pneumohydraulic drive – the TOX® Powerpackage. The “Components” division now includes pneumohydraulic and electromechanical drives as well as controls, sensors and software for process monitoring and quality assurance. In addition to a large range of presses, the system range comprises manual, machine and robot tongs. Another mainstay are modern sheet metal joining procedures, also incorporating the TOX® Clinching Technology, which makes the company today’s market leader.

Drives, processes and systems from TOX® can be found at automotive manufacturers and their suppliers as well as at industrial businesses for household appliances, electronic components, furniture and much more. Special versions of the TOX® Drives are also approved for the food industry.

TOX® is represented worldwide: 17 subsidiaries, amongst others in the USA and South America, Europe and South Africa, India, China and the entire Pacific Region. 18 representatives in many other markets support and advise local customers.

Press release



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