TOX® Press Systems

Compact Benchtop Presses - Advanced Press Systems

TOX® Press Systems

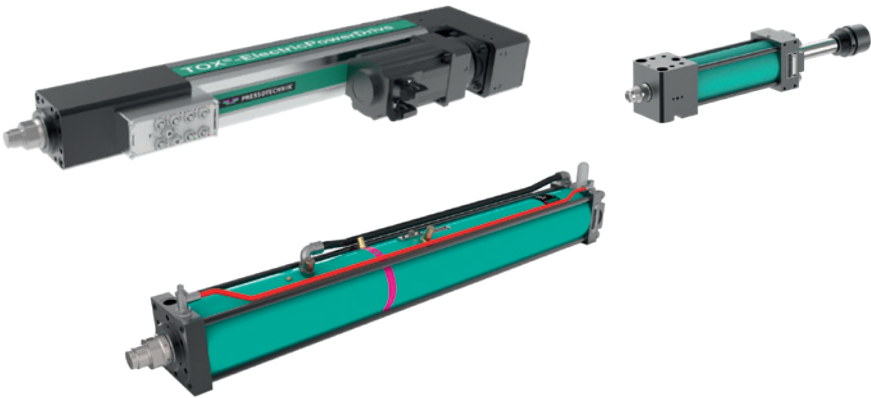## Output forces from 2 – 2000 kN, intelligently monitored

Clinching, punching, fastener insertion and marking – all applications require stable components that ensure precise tool guidance. We have the appropriate solution with TOX® Presses. Whether this involves manual workstations, automated C-frame presses or 2- or 4-column presses – the functional design of the TOX® Press modular kit principle allows easy and economic adaptation to your specifications. In addition to stand-alone models, our press systems can also be combined with automated solutions.
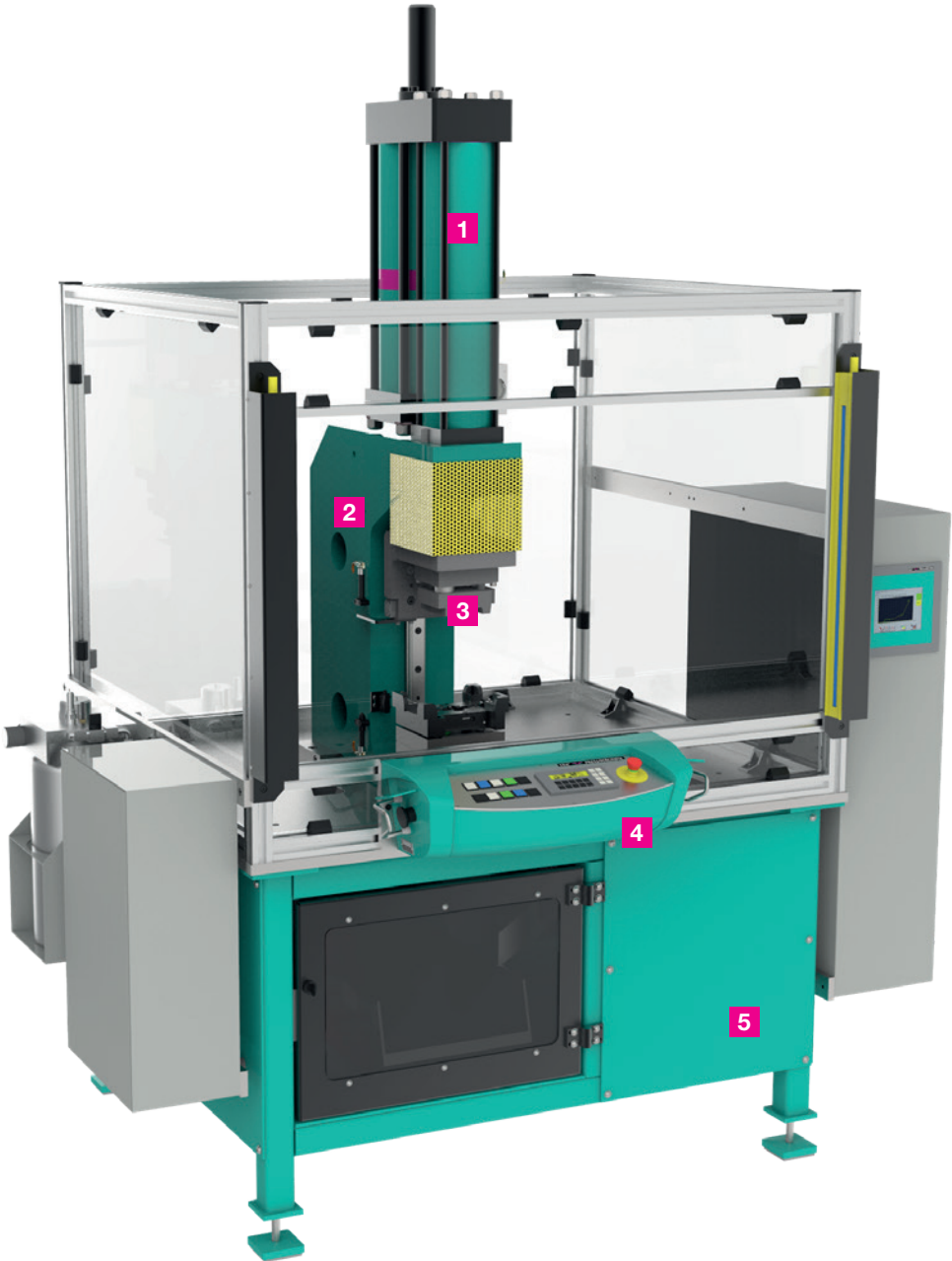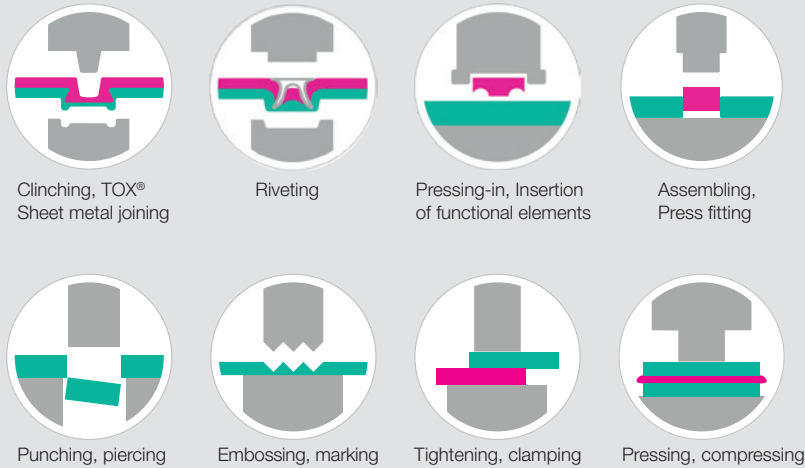
The modular kit principle

The ideal solution for your application: When it comes to choosing a standard press, you have numerous options. The TOX® modular kit principle makes it easy. To meet any further requirements, we can develop versions that exactly match your specification for dimension and function.

Drives 1

- Electromechanical drives TOX® ElectricDrive
- Pneumohydraulic drives TOX® Powerpackage
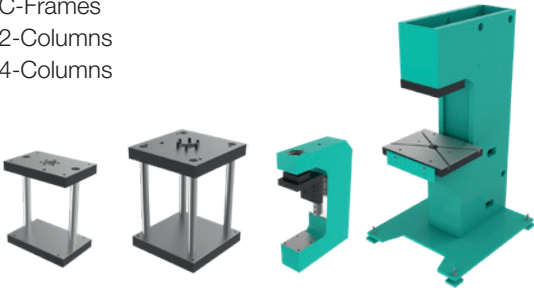- TOX® Hydraulic cylinder with external pressure intensifier

Typical applications

Clinching, TOX® Sheet metal joining	Riveting	Pressing-in, Insertion of functional elements	Assembling, Press fitting
Punching, piercing	Embossing, marking	Tightening, clamping	Pressing, compressing

Press frames 2

machined or welded versions

- C-Frames
- 2-Columns
- 4-Columns

Tools 3

- Clinching tools
- Press/stamping tools and setting heads
- Punching tools

Control systems 4

- 1-hand start + additional safety modules
- 2-hand safety control systems (also with PLC
- Foot pedal control systems + additional safety modules
- External impulse control systems
- TOX® Software and HMI on UDI Panel

Base frames 5

- Steel tube welded
- Steel panel bolted
- Aluminum extrusion
- Custom sizes possible

Components

Additional components add value

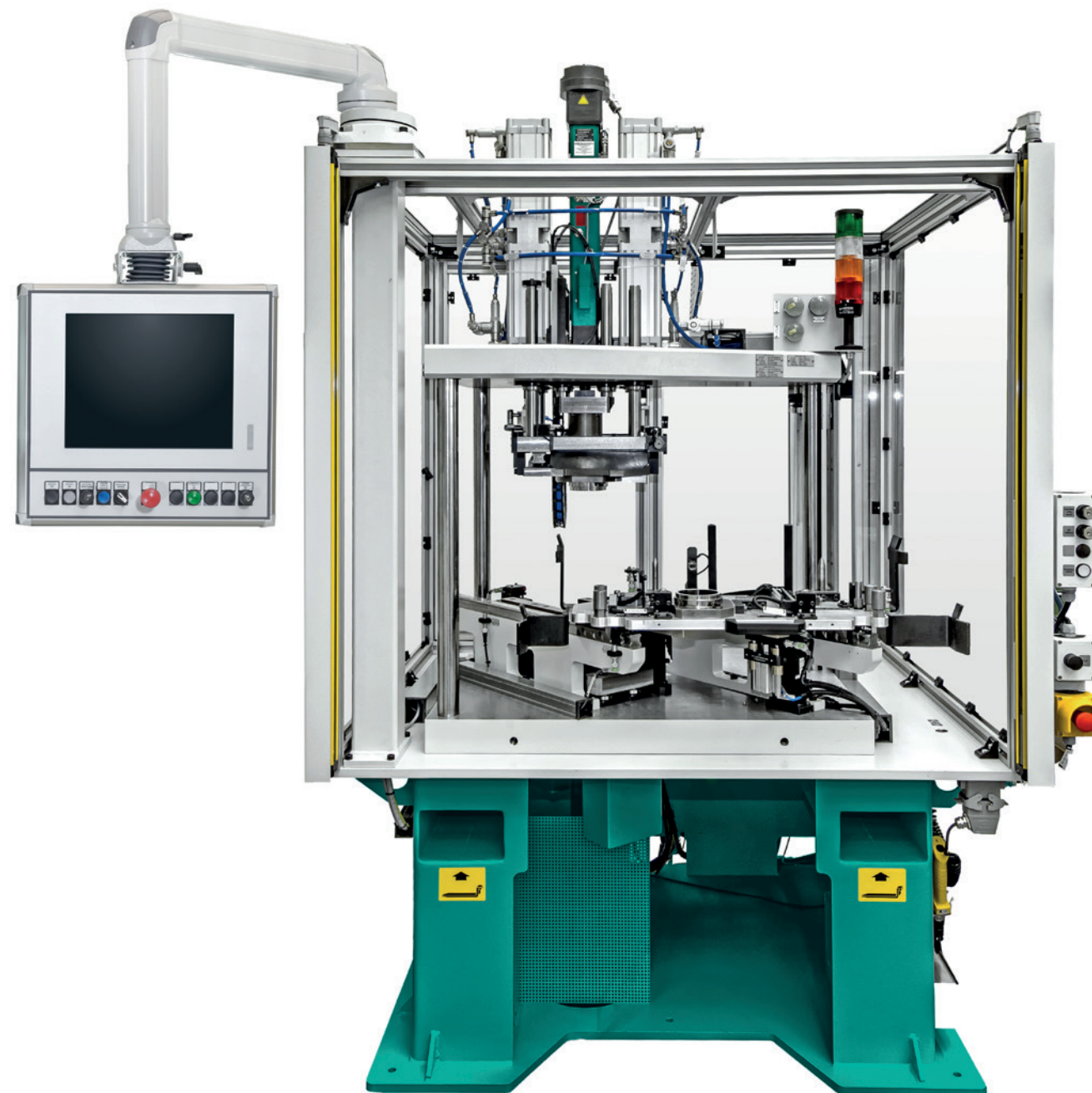### Safety features
to provide safety for man and machine

- TOX® Safety Guard Enclosures (Aluminum or Steel frame, Polycarbonate or Wire mesh)
- Light curtains (Access- and Rear area protection)
- Safety doors (Pneumatic or Rolling)
- TOX® Restraint Devices (Angular or Rod variant)

Workpiece handling
for more efficiency and higher productivity

- Sliding tables
- Rotary indexing tables
- Shuttle tables
- Pick and Place
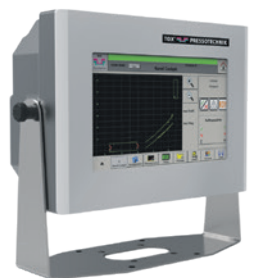- Robot placement

TOX® Processmonitoring
for more control, stable processes and better quality

Monitoring of processes by means of
- Window technique
- Envelope curves

Multiple possibilities
- Multi-channel evaluations
- Bus interfaces
- Data backup

TOX® Software and HMI
The intuitive software for Industry 4.0

- Configuration and control of the press
- Visualization and HMI
- Detailed processmonitoring and storage of quality data
- Operating system independent (Windows/Linux)
- Integration in networks
- On Customer PC /line PC or TOX® UDI Panel (available in 3 sizes)

TOX® Accessories
make work life easier

- Target equipment for exact positioning
- Tool couplings
- Sensors for
  - travel
  - force
  - pressure

TOX® FinePress

The TOX® FinePress program increases the productivity in your company thanks to its flexibility, quality and value – even with just a small investment. The sturdy benchtop presses are characterized by their precise guidance and flexible options. With the toggle press, rack and pinion press, pneumatic press with manual approach or purely pneumatic press versions we have the right solution for almost all manual work stations.

Advantages

- Best price performance ratio
- Extensive accessories
- Precision-guided ram
- Low-friction movement
- Pressing monitoring capable
- Hand lever adjustable 360°

Guide quality – the core and guarantee for best results.

- Robust guidance using recirculating ball guides
- No adjusting of the guide tolerance
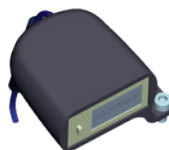- No readjusting

Stroke counter

- Electrical (battery) or pneumatical
- 8-digit display

Tool fixture ZA

- 3-in-1 solution for cylindrical clamping with and without thread or with set screw

Tool holding fixture ZAK with force sensor
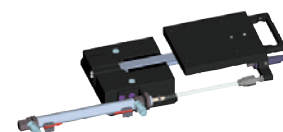
- For all bench top presses TOX® FinePress

Return stroke lock

- For toggle and rack and pinion presses
- Prevents premature return of the lever

Slide table

- Allows loading outside of press area
- Integrated damping
- For all presses up to 57 kN

Potentiometric position sensing ZW

- Easy mounting on return stroke lock and press head
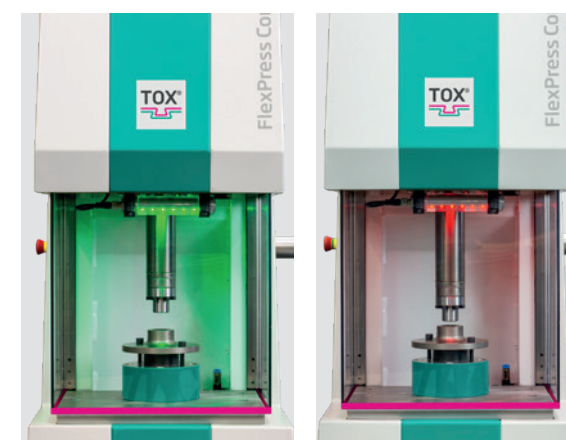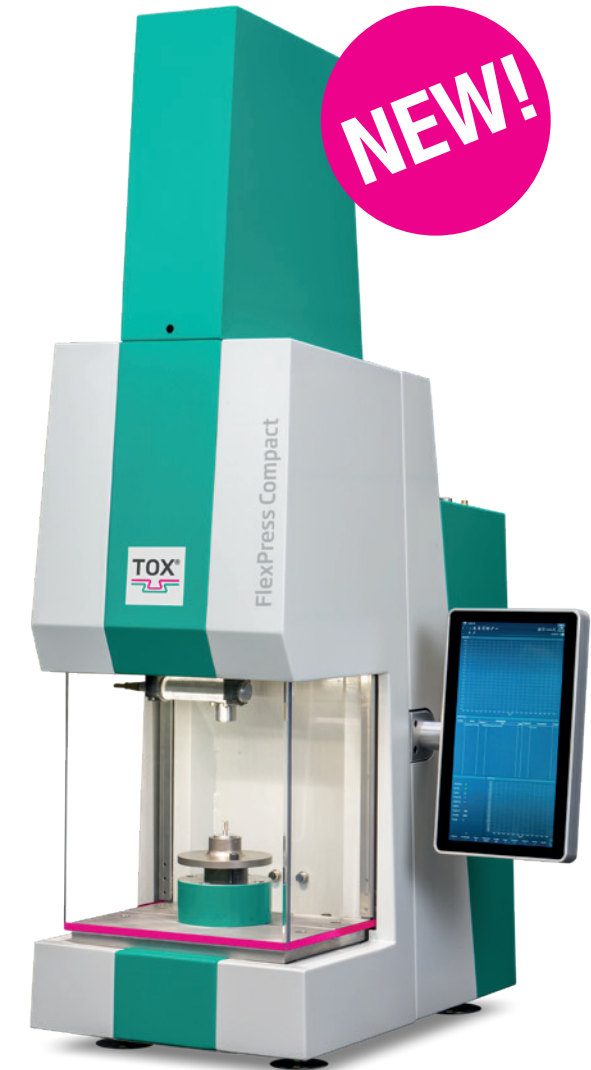
TOX® FlexPress Compact

The compact manual workstation for series production

The new TOX® FlexPress Compact combines flexibility in use with intuitive control and seamless process monitoring.
A simple tool change allows all processes supported by TOX® to be carried out within shortest time. Evaluate your data afterwards directly at the operating terminal or also by means of the master control - the interfaces are already included.

NEW!

Features

- Driven by TOX® ElectricPowerDrive in four versions: 5 kN, 10 kN, 30 kN or 60 kN
- Whether clinching, riveting, pressing in or similar - all technologies covered by TOX® PRESSOTECHNIK can be realized
- Seamless process and quality monitoring by the new TOX® Software on the 15" touch panel
- Low space requirement at the workplace due to particularly compact footprint and integrated control cabinet

Safety and ergonomics

The RGBW illuminated workspace provides the operator with visual feedback on the process.

On the one hand, this makes it immediately visible whether the process being carried out is OK. On the other hand, the operator can continue his work without having to check the display on the control panel.

- Fast moving interlocked safety door
- Extension of functions via EtherCat-Module in working area or control cabinet

TOX® Presses from 2 – 2000 kN

TOX® Press Frames to fit your application

Our standard TOX® Press Frames provide the basis for your individual press system. The frames are available in various designs and their dimensions are individually tailored. The slim and sturdy C-frames offer an outstanding price performance ratio and are ideally suited for forming, joining, fastener insertion, pressing, stamping, and arking.

When it comes to optimal pressing and stamping over large tooling areas the symmetrical press construction of the 2- and 4-column design is best. In combination with the appropriate components, such as drive, control system, tool set and also safety devices, you receive a press system tailored to your needs.

TOX® C-Frame Benchtop Presses

CEB / CMB Series

The use of flame-cut steel parts ensures flexible construction of the CEB series. It can be implemented into a machine and robot cell or as a stand-allone press. The tool ram of the CMB series, which is guided by linear bearings, eliminates the need for further tool guidance.

■ Press force up to 300 kN

MCC Series

The MCC series uses compact, sturdy and inexpensive cast construction to be operated as an individual press or in conjunction with feed or tool changing systems. The flexibility and versatility of the MCC series makes it ideal for pressing, marking or bending.

■ Press force up to 150 kN

MC Series

The height-adjustable console makes the MC series particularly flexible. It can be used as a tabletop machine, and can also be integrated into special purpose machines, transfer devices and production lines.

■ Press force up to 150 kN

TOX® C-Frame and C-Bow Presses

CEU Series

Sturdy welded construction with low deflection. The press bed is height adjustable and can be easily removed.

■ Press force up to 140 kN

CEC Series

The CEC series sturdy, cast construction with large depth for use in combination with the pneumohydraulic drive TOX® Powerpackage RZ or electromechanical drive TOX® ElectricDrive EPMR guarantees accurately guided tools even with long strokes.

■ Press force up to 84 kN

CEJ C-Frame Series

The flexible modular kit system of the CEJ series is optimized in conjuction combinable with our TOX® Robot tongs drives and suitable for various tool geometries.

■ Press force up to 80 kN

TOX® C-Frame Press PC series

The slim design provides open access from three sides. The welded and stress relieved frame body has minimum deflection.

■ Press force up to 2000 kN

TOX® 2-Column Press MB / MBG series

The 2-column/2-plate construction MB series with a slide or ball bearing guided ram plate combines high load-bearing capacity with small dimensions. The MBG series also offers a large tool assembly space.
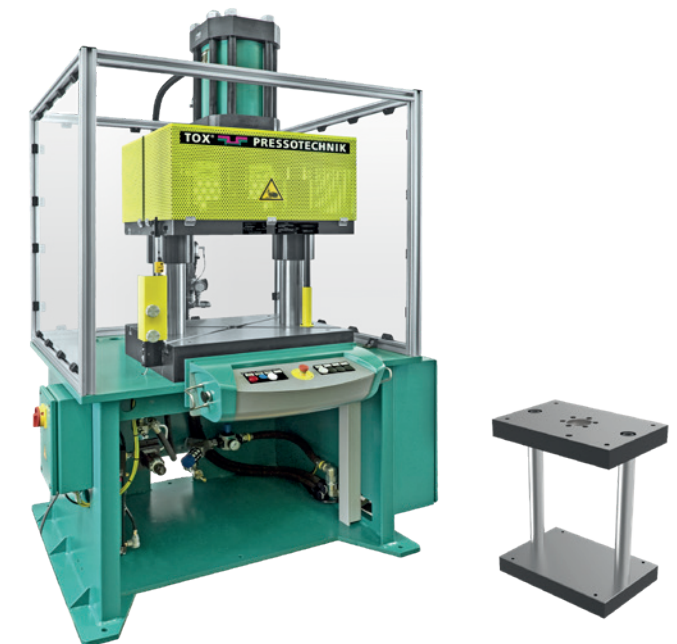
■ Press force up to 2000 kN

TOX® 4-Column Press MA / MAG series

The 4-column construction of the MA series distributes the load optimally over the entire pressing surface and minimizes deflection. The MAG series also offers a large tool assembly space. The modular construction allows for an individual customization, including, for example, a non-rotating tool holding fixture or a 4-column guided ram plate.

■ Press force up to 2000 kN

TOX® Software

Visualization and intuitive HMI

Whether you are working with the new TOX® Software as operator, repairer, process engineer, commissioning engineer or quality manager, the HMI impresses with a customizable user interface as well as clear, freely definable dashboards. Parameterization, operation, process monitoring, diagnosis and evaluation as well as quality data management are all combined in the TOX® Software.

The TOX® Software takes over the control of the TOX® PowerModule Core, which controls the TOX® Electric-PowerDrive. The communication takes place in real time and guarantees high repeatability and highest performance of the process control.

Userfriendly Software

- Modern user interface „look and feel"
- Widget based for customizable dashboards
- Intuitive handling
- Easy installation and parametrization
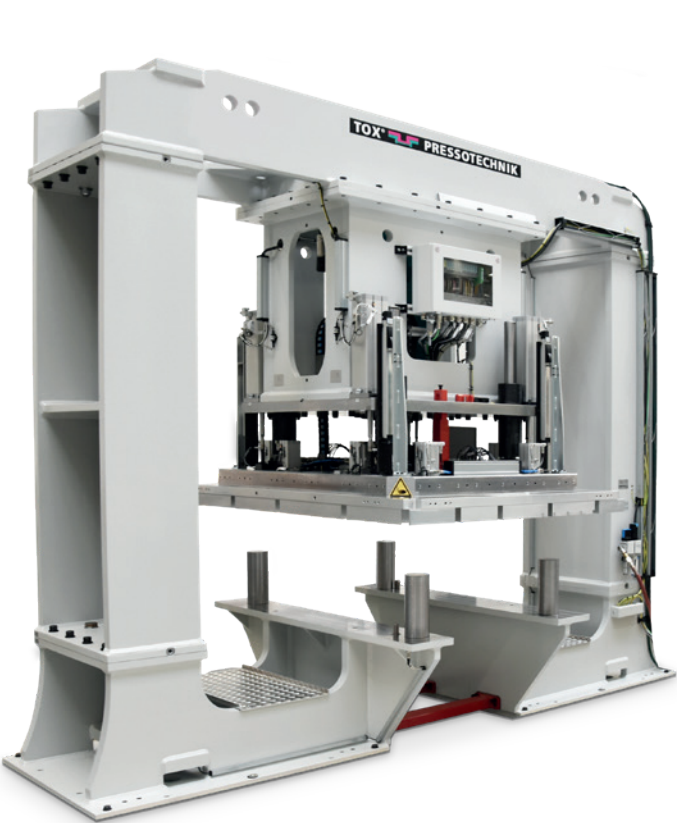- Integrated window technique for many applications

Technical Data

- For all TOX® ElectricDrive
- 5 windows per process freely defineable
- 500 software programs
- 2 channels e.g. force 1 / force 2 on position
- Flexible fieldbus with 32 words
- 10 tracks in one diagram
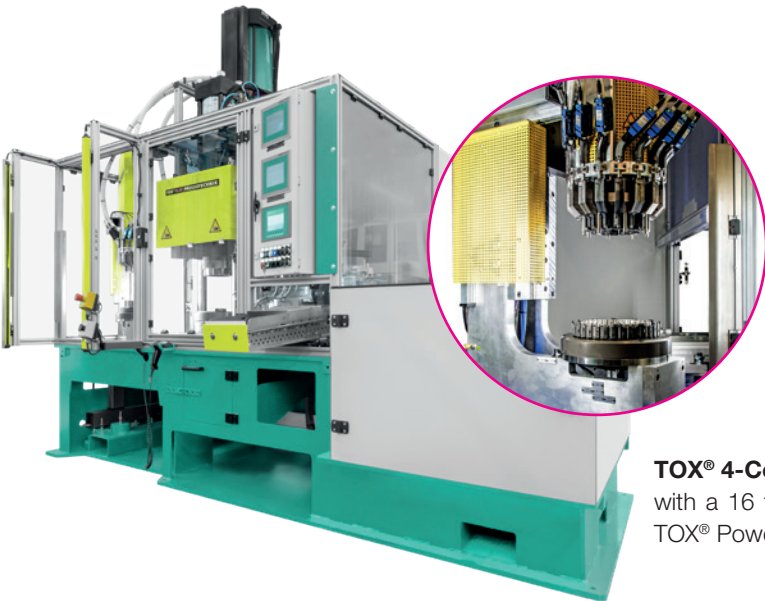- 5000 diagram points per track

Typical applications

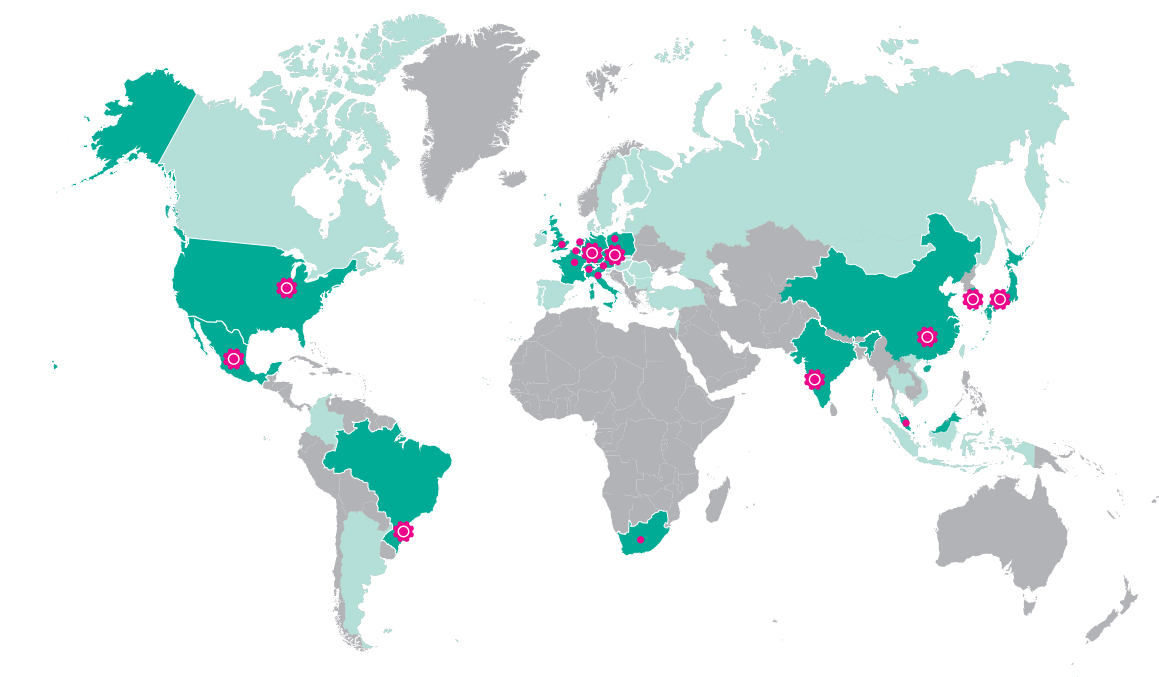## We design, plan and build complete presses and special machines

TOX® 4-Column Press MAG series
with electromechanical drive system TOX® ElectricDrive

TOX® C-Frame Press CMB series
with electromechanical servo drive TOX® ElectricDrive, safety controller with pneumatic door and touchscreen

TOX® 4-Column Press MAG series
with a 16 tool riveting system, pneumohydraulic drive TOX® Powerpackage, light curtain and transfer unit

TOX®

TOX® PRESSOTECHNIK SE & Co. KG
Riedstrasse 4
88250 Weingarten / Germany

Find your local contact at:
www.tox.com