

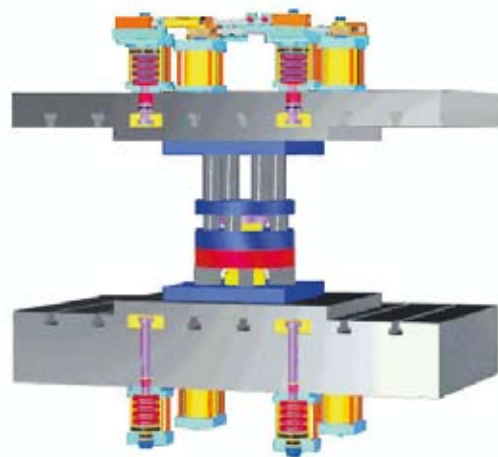
Tool Changing System



- Automatic tool clamping system in the press to substantially reduce set-up times.
- The system consists of hydraulic/mechanical locking units in the slide and press bed.
- The entire press bed area can be utilized and the system requires a minimum of tool adaptation.
- Tool lifters and consoles for the press bed make tool transport easier.
- Rail-mounted tool trolleys transport the tools to and from the press.
- Tool stands allow for storing the tools close to the press.

Automatic tool clamping

- Reliable and rugged hydraulic/mechanical construction. The tool is clamped mechanically without additional power supply and is released hydraulically.
- The system is completely integrated with the press and press control system. This allows the tool change to be monitored throughout the process.
- The basic system contains 4 + 4 clamping points. These can be increased if needed.
- Recessed clamping units in the press bed and the slide allow for optimal usage of the press bed.
- Precise repeatability of the tool positioning in the press bed.
- The clamping force is distributed evenly over the tool.
- No clamping units need to be removed in order to use traditional tool clamping.
- Requires a minimum of tool modification. Guides are mounted on the under side of the tool and catches on the upper side.
- Optional tool lifters and brackets make the tool change easier.



Automatic tool clamping 4 + 4



Tool guides for the under side of the tool



Tool catches for the upper side of the tool



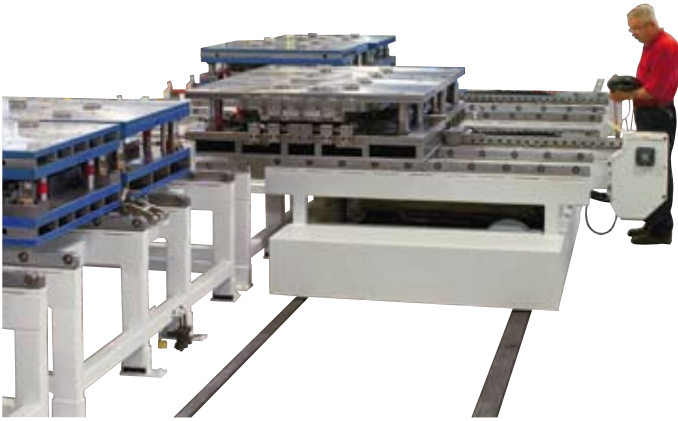
Tool lifters are placed in the press bed and facilitate tool transport



Brackets extend the press bed and are used when transporting the tool to and from the press

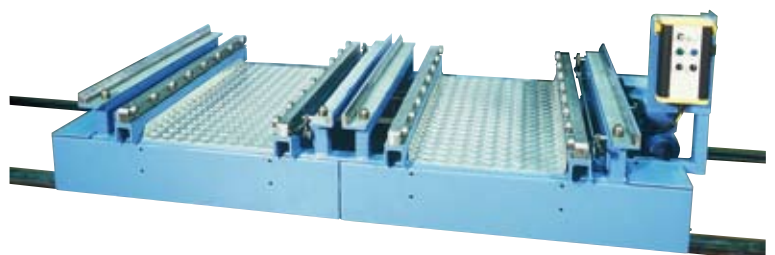
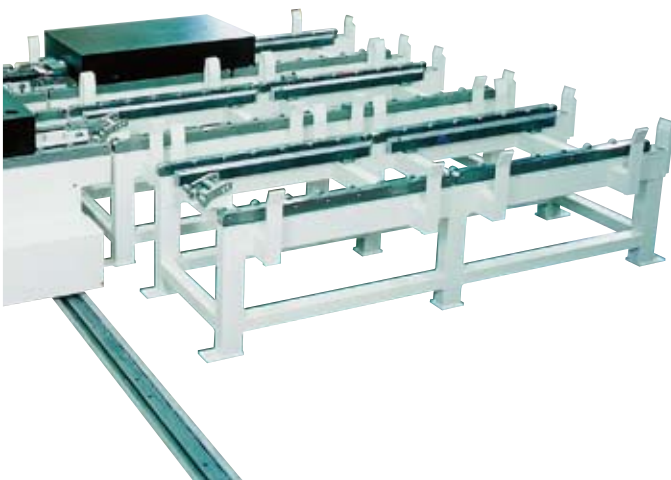
Tool trolley & tool stand

- The tool trolley is rail-mounted and transports the tool between the press and the tool stand.
- Designed for tool weights up to 60 tons and for tool sizes according to standard press bed.
- Able to accommodate one or several tools per trolley.
- Configured for tool changes from front, rear or side openings in the press.
- Available in manual, electrical or hydraulic operating modes.
- Manually operated trolley is used for lower tool weights where both the tool and the trolley are moved by hand.
- Electrically and hydraulically operated trolleys are used for heavier tools.
- Hydraulically operated chain for pulling and pushing heavy tools is placed either on the press or directly on the trolley.
- Tool stands designed for different tool sizes and weights are available for storing the tools close to the press.



Hydraulically operated tool trolley with double tool feeding chains

Tool stand

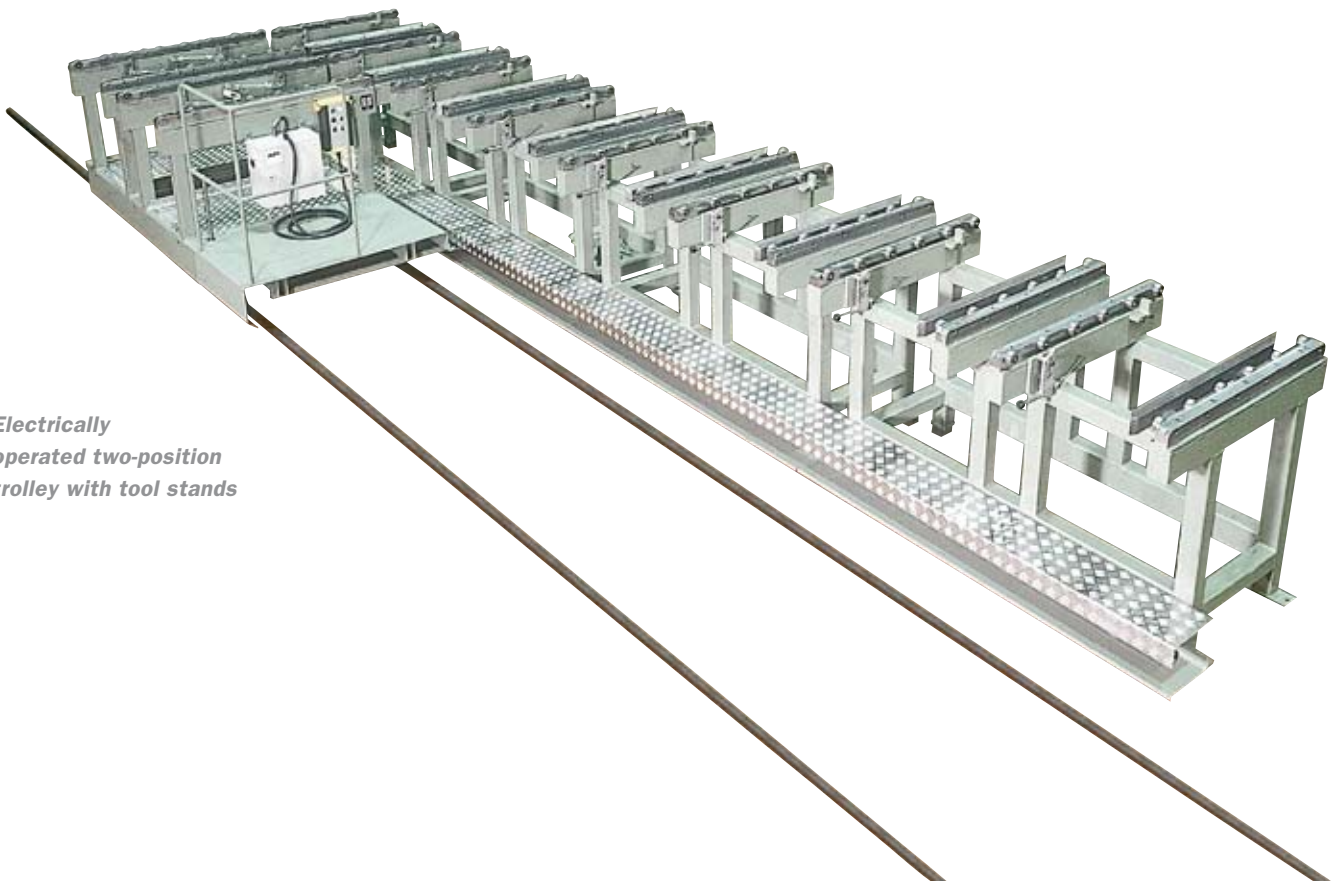


Electrically operated tool trolley



Tool handling system based on a hydraulically operated trolley with double tool-feeding chains and stands for tool storage. The tool trolley is rail-mounted and tool change is performed through the rear side of the press.

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Electrically operated two-position trolley with tool stands