

# PT 250



## Hydraulic Press for Chains

A Company of  
ThyssenKrupp  
Technologies

**BERCO** S.p.A.



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## Hydraulic Press for Chains

### Field of Application

The positive outcome of the release onto the market of the PT350 "heavy-duty" hydraulic press has inspired BERCO to create a new, reduced-size model with the exact same innovative design concepts and high-level working capacity.

This new "PT250" press is used for the assembly and disassembly of small and medium-sized chains.

Although as far as regards working capacity and power, it is similar to the previous PT200 model - which it will replace - this press has a completely revised and upgraded design in terms of structure, drives, and components.

### Structure and Cylinders

The supporting structure is in electrically welded sheet

metal. Its configuration and thickness (Fig. 2) have been analysed to obtain a significant reduction in mechanical stress - and therefore in subsequent deformation - under the heaviest working conditions. The large main cylinders have a limited working pressure when compared to that of similar models from our competitors, while maintaining the same levels of performance. Reduced working pressure is also an advantage in terms of operating safety, component integrity and durability, and for reliability, and regular movement.

### Hydraulic Box and Controls

The press is equipped with a separate hydraulic control box (Fig. 3) to which it is connected by means of flexible

hoses that are protected by a board to prevent squashing. Chain positioning movements and the control of the main cylinders are both carried out using electrohydraulic manipulators. This solution, together with the fact that the manipulators are placed in easily and ergonomically reachable positions, allows operator stress to be cut to a minimum (Fig. 4).

Hydraulic pressure is easily controlled using the maximum pressure valve on the control platform, which also has a built-in pressure gauge for set and operating value readings.

### Operating System

The operating method is the same as that of the PT200 model, which is widely used in this sector as well as being renowned for its reliability. A hydraulic winch is used to



Fig. 1

drag the chain onto the service roller. The first section of the service roller, which is hydraulically motor-driven as well as being an integral part of the press, serves to move the chain in two directions to position it correctly lengthways with respect to the punches and seating (mobile guide). A hydraulic cylinder moves this latter vertically to the two positions: up (working and fiducial position), and down (to allow horizontal movements of the chain). The equipment, which is separate for the two stages of assembly and disassembly, consists of a pair of plates, each with a punch on the pin side and one for the bushing side.

**Special Equipment**

The PT250 press is available with accident and injury

prevention safeguards for the operating area. These consist of a large transparent shield in LEXAN, which slides to allow easy and safe access to the area where links, bushing, and pins are to be positioned. When this shield is open it is not possible to start the hydraulic pistons. The machine may also be equipped with a pneumatically driven chain stop device, which is supplied as an optional extra. This device is useful in ensuring that the chain section is positioned correctly during the operating stages. The specific chain assembly/disassembly equipment (mobile guides, punch support plates and relevant punches) remains the same as that already used for the previous PT200 model.

Fig. 2

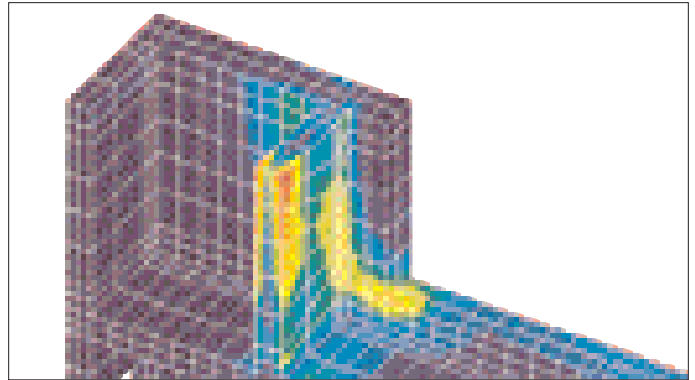
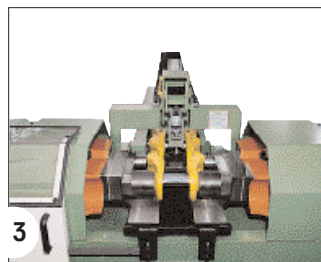
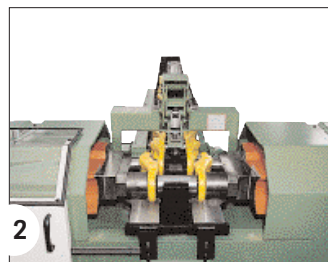
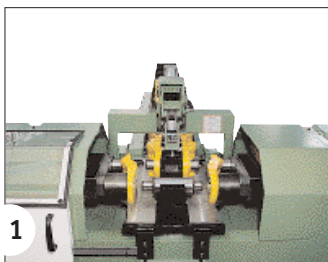


Fig. 3



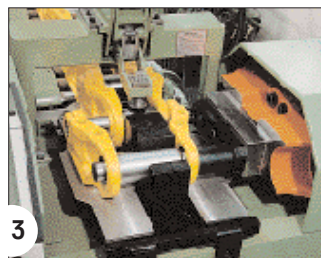
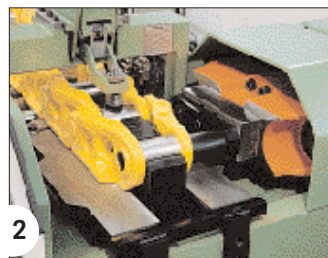
Fig. 4

**Assembly Operation**



- 1 Chain section components in the assembly position.
- 2 Link assembly stage.
- 3 Chain section assembled.

**Disassembly Operation**



- 1 Chain in the disassembly position.
- 2 Punches in contact with pin and bushing.
- 3 Final link disassembly stage.

# Technical data and main components

- Fig. 1  
General view of the PT 250 machine.
- Fig. 2  
Base section: graph showing the results of FEM analysis.
- Fig. 3  
Hydraulic control box.
- Fig. 4  
Electric controls and pressure adjustment valve.
- Fig. 5  
Complete chain assembly/disassembly line composed of: PT 250 press, CEM 7000 track wrench machine, and ACC/S track winder.

## Characteristics and Equipment

- No additional preparation or double operation required for chain assembly or disassembly.
- Maximum speed when passing from processing one type of chain to another.
- Motor-driven chain loading onto the service roller table.
- Maximum operating economy: a single operator is able to control the entire work cycle.
- Modular assembly and disassembly equipment for economical and easier replacement of worn parts.
- Reduced operating times. Assembly times for Caterpillar chains: D4 - 17 minutes; D7 - 23 minutes; D9- 32 minutes.

## Standard Equipment

- Motor-driven service roller to drag chains;
- Series of service wrenches;
- User and maintenance manual.

## Optional Equipment

- **A00.42636**  
Auxiliary service unit with idle rollers;
- **A00A39270**  
Support stand for auxiliary service rollers;
- **P11A41350**  
5-piece support rail for electromechanical wrench;
- **A99.81600**  
ACC track winder (see separate prospectus);
- **A99.81700**  
ACC/S winder for large tracks (see separate prospectus);

- **A99A41000**  
CEM 7000 electromechanical wrench machine for the shoes on tracked vehicles (see separate prospectus);
- **A99.75000**  
DCL chain lubrication and control device (see separate prospectus);
- **A99.87000**  
DCL/D chain lubrication and control device complete with dosing device (see separate prospectus);
- **V91A39002**  
Sliding accident prevention safeguard;
- **V31A39002**  
Chain stop device with pneumatic control.

**N.B.** Punch support plates and mobile guides are supplied separately, according to the chain type, (see the relevant M116 handbook).



Fig. 5

# Technical Data

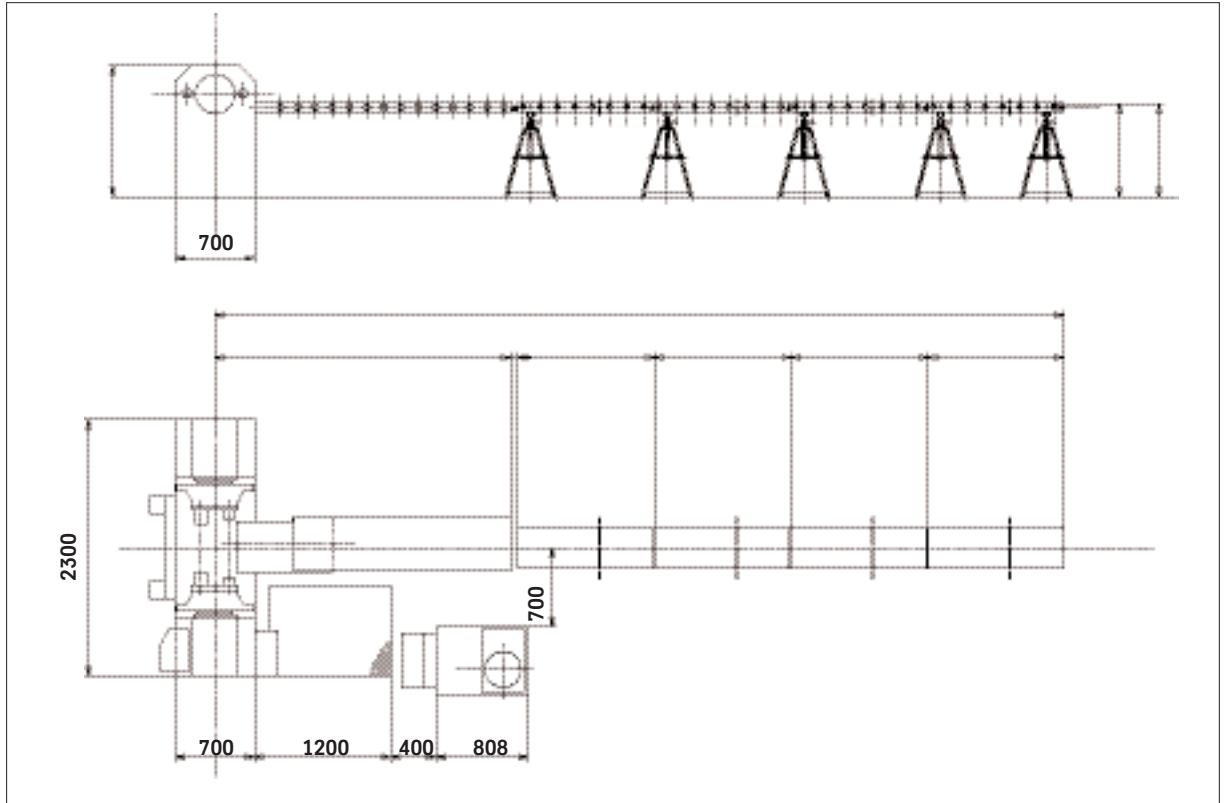


Fig. 6 Overall dimensions of the press with relevant service roller.

## Operating Capacity

Piston maximum thrust capacity	tf	184	203 sh tons
Max. working pressure	bar	315	4570 lbf/in <sup>2</sup>
Piston rod diameter	mm	230	9.05"
Max. piston stroke	mm	160	6.30"
Max. distance between punch support bases	mm	760	29.9"
Max. table height at the centre of the punches	mm	92	3.6"

## Speeds and Forward Feed

Max. piston forward feed speed	mm/min	1270	50"/min
Min. piston forward feed speed	mm/min	402	15.8"/min
Approx. piston return stroke speed	mm/min	2800	110"/min

## Electrical Motor Power

Potenza del motore elettrico	kw	15	(20CV)
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## Weights and Overall Dimensions

Length without auxiliary service rollers	mm	3100	122"
Length with four auxiliary service rollers	mm	13020	512.5"
Width	mm	2300	90.5"
Height	mm	1145	45"
Approx. weight (packaging excluded)	kg	4900	lb 10800

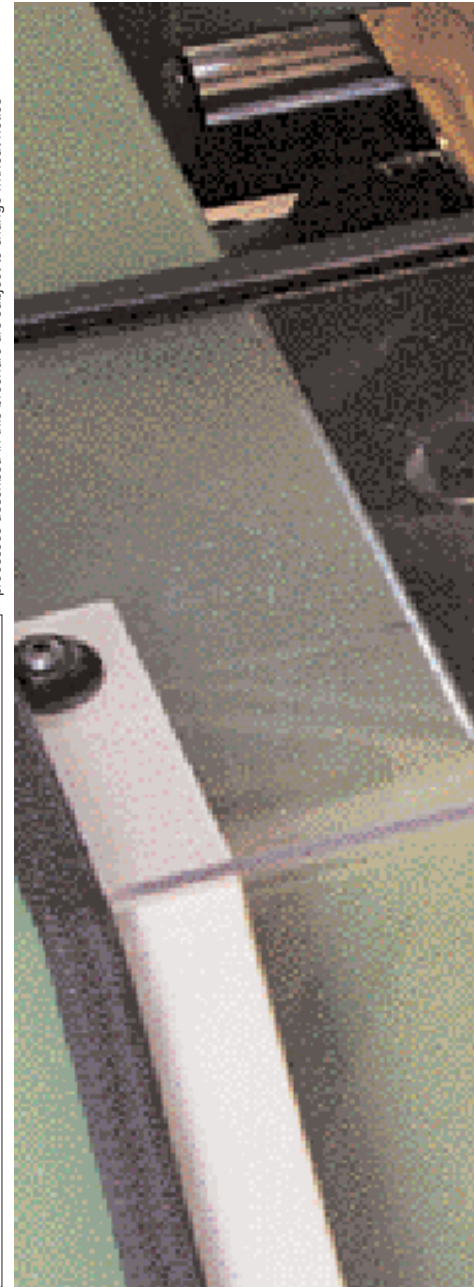
Electrical motor power refers to a frequency of 50Hz.

Weights, measurements, and designs may be subject to modification with no prior warning.



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All manufacturers's names, numbers, symbols and descriptions are used for reference purposes only. All parts listed are of Berco original production. The specifications and processes described in this brochure are subject to change without notice



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