



PT 350

HYDRAULIC TRACK PRESS



hydraulic track press

OPERATING FIELD

With its new hydraulic PT 350 press, Berco adds an updated and powerful working instrument to its already well-known range of machines and equipment used in the tracked vehicles maintenance sector.

Due to its capacity and size, this model allows assembling and disassembling operations to be carried out safely and efficiently, on all chains up to a maximum inside length of chain link of 350 mm. Such a range includes the largest ones among modern tracked vehicles: Komatsu PC1000-2, Orenstein & Koppel RH90C and RH120C, Caterpillar D11 and others.

In line with the Berco tradition, the performance and reliability of the new PT 350 press have been fully tested in the production departments of our plants, under the most severe of conditions for volume and continuous workload.

STRUCTURE

During the design phase, we have widely used the new computer-aided technologies, such as the structural analysis with the finite elements method, so that to optimize the size of the machine.

The structure, for instance, made with electrically welded plates, has been analysed in terms of plate thickness (see figure 1), thus obtaining a remarkable reduction of mechanical stresses and, as a consequence, of deformations when performing heavy duty operations.

An innovative design (so called "tandem design") has been implemented for each one of the two main cylinders, with an horizontal and opposed layout.

Considering the same maximum available thrust, this solution allows smaller diameters cylinders, thus reducing space and stresses.

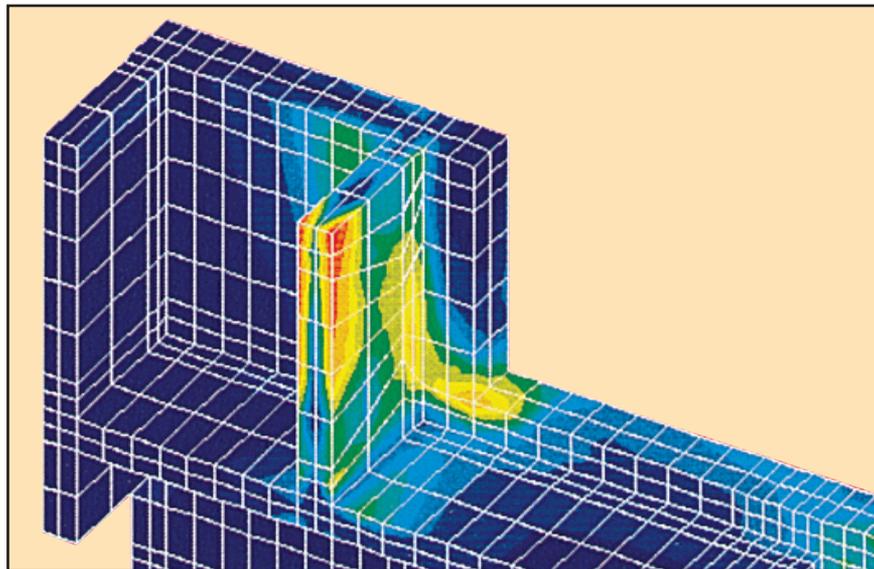


Fig. 1 - Graphic result of the finite elements analysis.

Fig. 2 - Hydraulic box assembly.



Fig. 3 - Electric controls and pressure control valve.



HYDRAULIC BOX AND CONTROLS

This press is completely hydraulically-controlled by means of a separate hydraulic box located in the back of the machine. The box is connected to the machine through flexible hoses (see figure 2).

The controls for the activation of the working movements are "electric manipulator" low voltage type. Their size is suitable to make their use easy also for operators using working gloves. Their location has been studied carefully based on ergonomic evaluations in order to minimize the movements for a normal operation.

On the front side of the machine, in an easily accessible place for the operator, a manually-operated valve (see figure 3) for the adjustment of the maximum hydraulic pressure level together with the relevant control pressure gauge, have been installed.

OPERATING SYSTEM

The working procedure is the same as for model PT 200, widely known and used by this sector's users thanks to its reliability.

An hydraulic winch pulls the chain along the roller conveyor; the first part of the roller conveyor (which is an integral part of the press and whose motor is hydraulically-operated) is used to move the chain in both directions; it is also used for the correct lengthwise positioning in relation to the assembling and disassembling plates and to the slide (movable rest insert). The slide, through an hydraulic cylinder, is vertically moved in the two possible positions: high (reference and operating position) and low (thus enabling the chain horizontal movements). The equipment, for the assembling and disassembling phases, consists of a pair of plates. Each plate is composed by two pushers (one for the pin side and for the other one bushing side).

SPECIAL FITTINGS

The PT 350 press is supplied complete with the required protection equipment for the operating area which includes a sliding door with wide LEXAN windows (fully complying with the European safety standards - EC).

When the protection devices are open, only positioning movements are allowed. Together with the sliding protection, the machine can also be supplied with a chain blocking device.

It makes sure that the part of chain along which you are operating is kept in the proper position. This device is pneumatically operated, both automatically (when closing the protection device), and manually with a selecting mechanism.



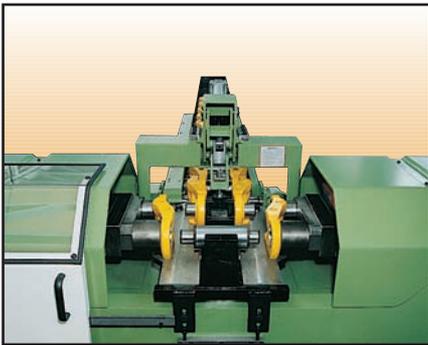
Fig. 4 - General view of the PT 350 machine.

assembling and disassembling operations

ASSEMBLING OPERATION

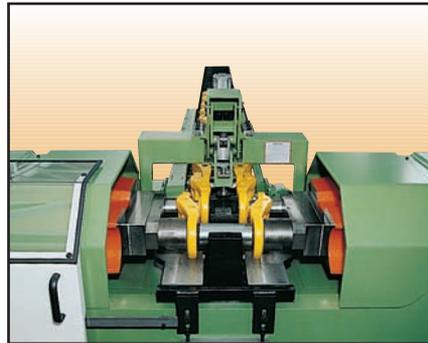
1

Elements of the chain section in assembling position.



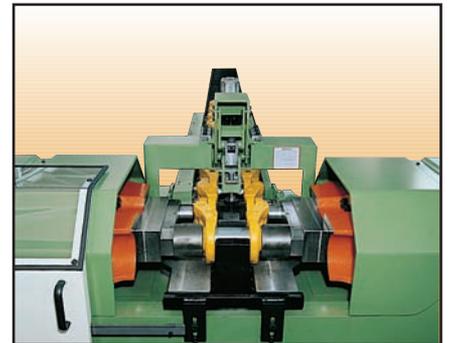
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Link assembling phase.



3

Section of assembled chain.



DISASSEMBLING OPERATION

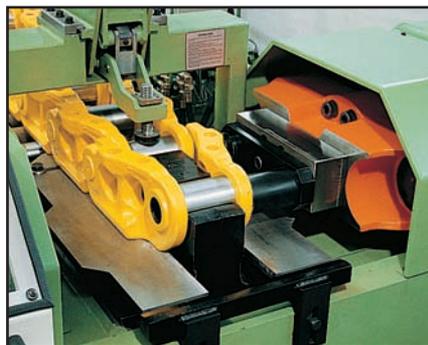
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Section of chain in disassembling position.



2

Pushers against pin and bush.



3

End phase of the link disassembling.



STANDARD OUTFIT

- Motor-driven roller conveyor for pulling track chain
- Set of service tools

EXTRA OUTFIT

- A00A36250 - Auxiliary idle roller conveyor (min. 4 pieces suggested)
- A00A36270 - Stand for auxiliary roller conveyor
- A00A36330 - Sliding protection device
- A00A36300 - Pneumatically operated chain blocking device
- A00A36962 - Plate kit for PT 200 pusher-holder use (2 pieces are needed)

N.B. Assembling and disassembling plates and movable rest insert are supplied separately, according with the type of chain.

technical data

WORKING CAPACITY

Max. thrust capacity of rams	tf	325	358 sh ton
Max. working pressure	bar	350	4980 lbf/in ²
Ram rod diameter	mm	270	10 5/8"
Max. approach speed of the rams	mm/min	1050	41"/min
Min. approach speed of the rams	mm/min	280	11"/min
Approx. return speed of the rams	mm/min	2100	82"/min
Max. travel of the rams	mm	190	7 1/2"
Max. distance between the rams ends	mm	1000	39"
Max. distance table surface to ram C/L	mm	125	5"
Winch pull	kgf	4500	9900 lbf

MOTOR RATING

Hydraulic control box main motor	kw	22	(CV 30)
Auxiliary motor	kw	0,55	(CV 0,75)

DIMENSIONS AND WEIGHTS

Height	mm	1800	71"
Width	mm	3300	130"
Length, less auxiliary conveyors	mm	3200	126"
Length, with 4 auxiliary conveyors.....	mm	14800	582"
Approx. volume/weight, sea-packing	kg	9000	lb 19800

Motor rating is referred to 50Hz frequency.

Measurements, weights and executions are not binding on manufacturers and can be changed without previous notice.

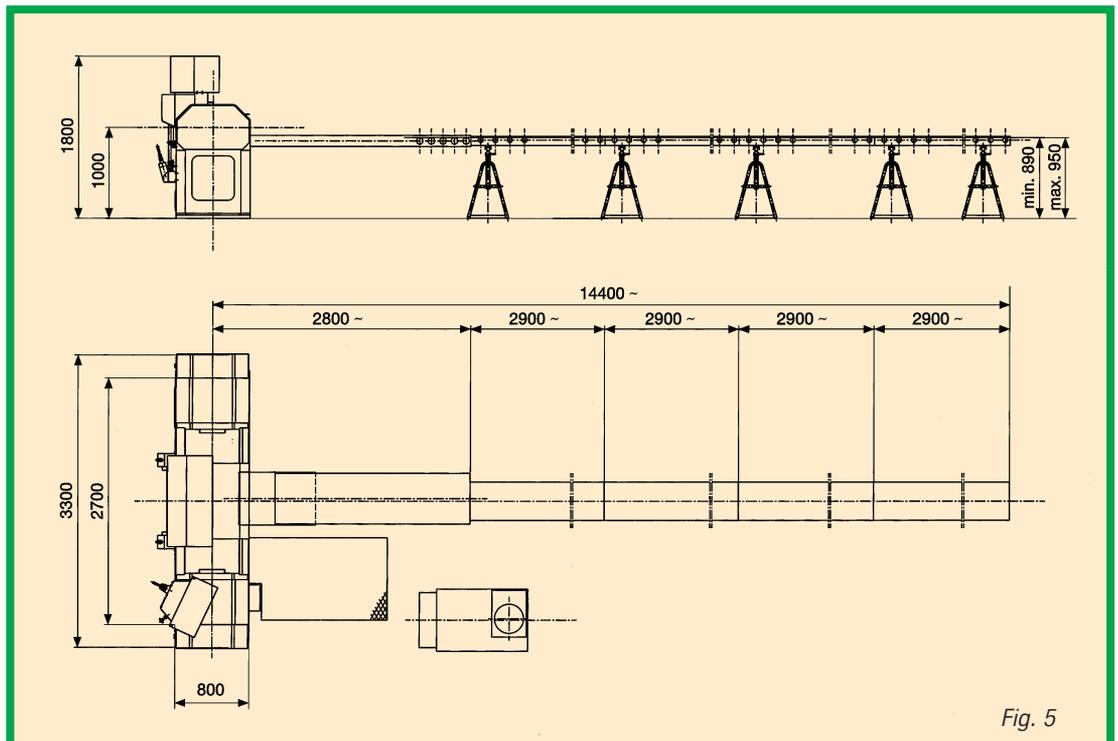


Fig. 5 - Overall dimensions of the press and conveyor.



BERCO - MACHINE TOOL DIVISION

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