

POLYMERTEST

Tr.T.Bati 299 , 764 22 Zlin

Orfee to delivery: **TECHNOLOGICAL HYDRAULIC PRESS 400x400/100 t**



Using:

Technological hydraulic press is designate for heating and pressing products (testing bodies). It is mainly designace pro pressing testing bodies for laboratories, there is no requirement for high number of pressed pieces during the shift. The testing bodies are pressed directly or by two-piece or more-piece form, which are put in between upper and bottom heating plate of the press..

Description of the construction:

The machine construction guaratee easy work and expedient use of working period. The base of the bottom-compressive press is made by the steel table. The press from the linear hydraulical motor is transmit by piston to steel table on what is fixed the bottom heating plate. For the vertical control of the bottom working plate is used hydraulics. The plate heating (upper and bottom) is electrical. The electroinstalation is set in separate cabinet on the left side of the press. Working part is saved by saving lighting screen. Because of safety the press has double-hand control.

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Automatic thurst

The press after free the buttons for moving of the level hydraulically lock up the position of bottom level. There is possibility for pressing with constant press. It means, that in clamping stage is working the pump and under the piston is preserved the set pressure. It could be used for pressing the samples, which are by pressing contracted and is necessary constant pressing force. When the bottom level would be locked and the pressing material would be reduced thickness of the pressing material, the pressure in the cylinder would go down and by this the pressing force too, and it could be in some cases unwelcome.

The possibility of switching on the thurst is set to 20tons. It means, that the operators holding the buttons for moving up so long, till the pressing force will be on 20 tons – the signal lamp will shining „threshold in pressing force“. After this the buttons could be release and press the button „ pressing force start“ on the panel. The pump is switched on automacaly and under the piston is the pressure as is set on hand saveing valve on the panel. For end for pressing press the buttom „pressing force stop“ and the thurst is switch off. After this could be the bottom level switch on by the buttons on the top covering or continue with pressing without thurst – the level of the press is hydraulically locked.

Besice the hand saving valve is needle barometer showing the pressure in the cylinder. It is only orientational data.

Control style and work on data:

Hand mode:

The press is controled by buttons on the control panel located on right side of the machine .
One the panel is:

- digital temperature regulators, separately pro buttom and upper plate
- rotary controler for choise of heating plates
- digital press monitor
- thurst setting controler
- timer for switching off the press after vulkanizing time
- optical signalizing passing the vulkanizing time

Control by PC:

The press is controled by PC (office version) with standard supplements (mouse and keyboard).

Controled is electrical part. Inside the press cabinet are unit for transmission of singals for communication with PC. Controlling PC is with the vulkanizin press cabinet connected by communication cable. Controlling systém allowing following functions:

- seting the wanted values pro temperature regulation

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- represent of real heating plates temperature, theirs recording in time-grafic addiction with the possibility of the archiving
- display of momentary thurst of heating plates, display of thurst forece during technological cycle
- expiring vulkanizing time signaling
- treatment and print record
- display of datas history (temperature history and history of thurst force)

The program allows the fill in and print the protocol with requested datas and their achiving.

The actual condition is displayed on the monitor – temperature and thurst force.

The program allows fill in and print the protocol with requested datas as:

- firm name
- Date and time
- The name of staff who worked with the press
- Type and number of material
- requested and real pressing time
- requested and real temperature and thurst force of both heating plates in form fo chart and diagram.

Display of the quantities on the monitor – basic panel

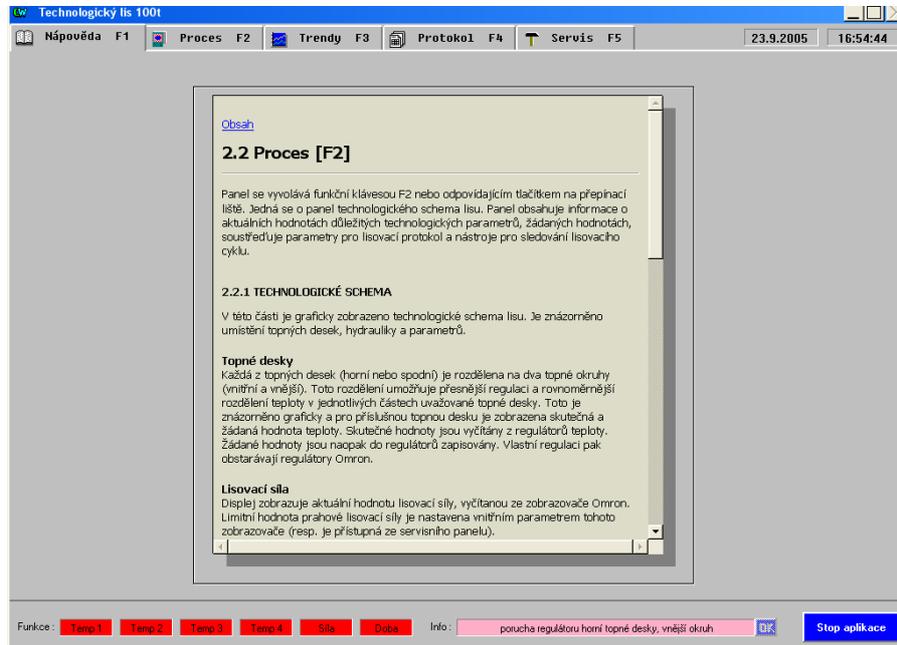
The screenshot displays the 'Technologický lis 100t' software interface. The main window is divided into several sections:

- Top Bar:** Shows the application name 'Technologický lis 100t', function keys (Hápvěda F1, Proces F2, Trendy F3, Protokol F4, Servis F5), the date '23.9.2005', and the time '16:52:43'.
- Left Panel (Schematic):** A diagram of the press mechanism with labels for 'Horní topná deska', 'Lisovací síla', 'Spodní topná deska', 'Vnější topný okruh', 'Vnitřní topný okruh', 'Ruční nastavení lisovací síly', 'Elmag. rozváděč', and 'Hydraulický agregát'. It includes numerical readouts for 'žádáná' (requested) and 'skutečná' (actual) values for temperature and force.
- Right Panel (Parameters):** A form for 'Parametry lisovacího protokolu' with fields for 'Číslo protokolu' (2005-04-30-0002), 'Základní údaje' (Číslo úkolu, Zadavatel, Typ tech. lisu, Lisování provedl), 'Poznámky', 'Materiálové údaje' (Typ, Označení, Rozměr, Počet kusů), and 'Technologické údaje' (Teplota horní desky, Teplota spodní desky, Přilučná síla, Doba lisování).
- Bottom Section:** 'Sledování lisovacího cyklu' with buttons for 'START záznamu', 'STOP + Úložiš', and 'STOP + Storno', along with an 'Interval archivace' field set to 0.1 min.
- Status Bar:** Displays 'Funkce:' with indicators for Temp 1, Temp 2, Temp 3, Temp 4, Síla, and Doba. It also shows 'Info:' with a message 'poucha regulátoru horní topné desky, vnitřní okruh' and a 'Stop aplikace' button.

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The panel with the function description



Technical datas

Max. compressing force	to 100 t
Adjustable compressing force – constant maintained during the pressing	
The heating plates working temperature	50 až 250 °C
The regulation accuracy to 150°C	±2°C
The regulation accuracy to 250°C	±3°C
The number of heating plates	600 x 600 mm
Max.form dimension	400 x 400 mm
The level bore	150 mm
Max. desk speed	to 2 cm/s
Supply	cca 20 kVA
The machine dimensiones	cca 1 x 1,2 x 1,75 m
The pess weigh	cca 2,5 t

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