Laboratory Platen Presses

LabPro Series: for customer-specific solutions



The Fontijne laboratory Platen Presses are being used in the polymer processing, rubber, and composites industry. The presses are utilized as sample preparation equipment for: Quality control, Research and Materials development.

The Fontijne Presses LabPro (from 50 up to 1000 kN) are compact and designed for laboratory use and small production. The LabPro series is developed for more customer specific requirements. The platens are designed as a combined heating- cooling plate and provided with inlets/outlets to connect external temperature regulation systems.

Design Elements:

Press frame: an ergonomic mode of operation because of the 2 columns press frame. The lower platen is connected to the hydraulic cylinder and an upper platen is mounted on the press frame.

Press Platens: equipped with electrical cartridge heating elements and cooling channels, which make it possible to heat-up and cool-down the product. The new designed platens guarantees an accurate temperature-distribution over the platen surface.

Hydraulic unit: the dual integrated pumps ensure fast closing and accurate pressing and adjust the pressure automatically to maintain a stable press force on the sample product.

LabPro Design Features:

- Custom build, to meet specific requirements
- Compact and simple to operate
- Ergonomic
- Reliable construction
- Electrical heating and water cooling integrated
- Low noise level in operation
- High safety level



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Customer Specific Solutions

Cassette cooling system: for rapid and sequence cooling while maintaining heated platens. Multiple daylights: (extra heating/cooling platens) for multiple sample preparation. High temperatures: electrical heated platens up

to 450° C. Special frame including cooling of frame and press table.

Vacuum chamber: for preparation of samples in vacuum conditions (30 - 40 mbar).

Floating upper platen: for lower press range (1-10kN), pneumatic control of pressure.

Technical Data

LabPro		50	200	400	600	1000
Closing Force	kN	50	200	400	600	1000
Platen size	mm	225 x 225	225 x 320	320 x 320	400 x 400	500 x 500
Cylinder stroke	mm	200	200	200	200	200
Specific platen pressure	N/cm ²	99	277	390	375	400
Capacity per platen	kW	1.5	2.2	3.2	5.0	7.5
Max. temperature	°C	300	300	300	300	300
Closing speed	mm/sec	23	13	13	13	11
Press speed	mm/sec	0.9	0.31	0.31	0.31	0.25
Weight nett/Gross	kg	225/225	335/365	450/480	725/755	1275/1325
Length	mm	850	860	950	1050	1160
Width	mm	555	555	570	650	750
Height	mm	925	925	975	1000	1085

Control Systems

Three new control systems are developed in-house for the LabPro series. The features include digital press force and temperature controllers. The standard manual control has a basic user interface, this can be extenaded by a programmable and PC control system.

Manual Control

T upper plate [°C]	0	0	0	1
i upper plate [C]	0		<u>٩</u>	
T Lower Plate	0	0	0	
Force [kN]	0	0	0	1
Time [h:m:s]	00:00:00	00:00:00	00:00:00	- 9
	t1	t2	t3	

- Temperature & pressure control
- 8" touch panel
- Storable table program with 3 phases on time base

Programmable Control



Temperature & pressure control

- 8" touch panel
- Storable recipe builder on time base
- Simple Process Pre View
- Read-out of Data Acquisition
- Meets ASTM/DIN/ISO Standards

Lab Pro View



- Temperature & pressure control
- 15" touch panel
- Storable recipe builder with commands and events
- User defined subroutines
- Process Pre View
- Data Acquisition of selectable parameters with export to Excel
- Meets ASTM/DIN/ISO Standards



Fontijne Grotnes BV

Vlaardingen, Netherlands Phone: +31 (0)10-434 82 33

Fontijne Grotnes Inc. Buffalo Grove, Illinois, USA Phone: +1 224 588 9333

platenpresses@fontijnegrotnes.com www.fontijnepresses.com Represented by: