



**Meet LabPro, a series of highly customizable state-of-the-art laboratory presses by Dutch specialist Fontijne Presses. The LabPro is a floor standing hydraulic press which can be tailored to meet your specific needs and requests. LabPro presses are known for their exquisite and consistent pressing quality and are used in demanding laboratory environments and R&D facilities around the world.**

Even though the closing force of the most powerful LabPro model can reach up to more than 5.000 kN, pressings that need much lower closing forces – 10 kN or less – will be handled with the same accuracy and consistency.

The LabPro press is largely automated and is equipped with a user-friendly touch screen control interface. Moreover, the integrated preset builder allows lab technicians to build and store up to 999 press recipes.

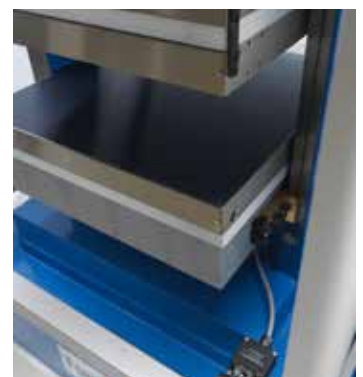
The hydraulic laboratory presses by Fontijne Presses are designed with the safety of the operator in mind. The CE-certified LabPro series therefore incorporates many safety features, such as a fixed upper platen, an emergency stop system and a safety shield.

An extensive range of options is available for the LabPro series, including a unique and very effective vacuum system which allows the use of high temperatures under vacuum conditions.

LabPro is the right choice for the most demanding quality control and R&D applications, as well as for the preparation of specific sample materials that need a custom approach.

## TOP-OF-THE-LINE PRESSING QUALITY

The LabPro series is the very best solution Fontijne Presses has to offer. It is built around a precision-built 2-column design that uses a tailor-made prism guide block to guarantee the best possible guidance of the lower platen. This results in extraordinarily high parallelism (< 0,1 mm) and a very consistent pressing quality. Furthermore, force and temperature are accurately and evenly distributed across the entire platen surface. In addition, the pressure is built-up in a highly controlled fashion, resulting in an exceptionally accurate pressing quality.



## FULLY CUSTOMIZABLE

In addition to the extensive range of typical accessories – see below – several special options are available as well, such as a vacuum chamber to prepare samples in vacuum conditions (30 to 40 mbar) and floating upper platen to allow for low closing forces (< 10 kN). LabPro presses can also be delivered with oil heating, a cassette cooling system and customized daylight and platen sizes. Please contact our sales division if you have any specific requests regarding your LabPro press. We're happy to make you a purpose-built press which perfectly suits your needs.

## EASY-TO-USE GRAPHIC INTERFACE

Thanks to the user-friendly touch screen interface, the LabPro's functions and settings are easily accessible. Moreover, the graphic interface clearly displays the progress of ongoing processes.

The LabPro is equipped with the ProView system, which uses a 15" touch screen. This system allows you full control over the press cycle and comes with a wide range of features and setting options:

- Temperature and pressure control
- Heating and cooling ramp functions
- Pressureless preheating
- Graphical representation of the process
- Data recording & USB export options
- Different user access levels
- Compose and store up to 999 presets



## BUILD YOUR OWN PRESS RECIPES

Lab technicians can easily build and store up to 999 press recipes, using the built-in preset builder. Starting a preset will fire up the corresponding process cycle automatically and will execute all programs commands and events.

## AUTOMATIC VENTING AND EXHAUST HOOD

Automatic venting as well as the exhaust hood are part of the press technical requirements. Automatic venting cycle/degassing stroke allows to vent the unit, by automatically opening and closing – after a preset period of time – the press. From 1 to 99 venting cycles. The LabPro press comes with an exhaust or extraction hood that sits on top of the press and can be connected to an existing exhaust system, using the Jacob  $\varnothing$ 200 mm connection flange.

## SAFETY CAGE & EMERGENCY STOP

The CE-certified LabPro press was designed with the safety of the operator in mind. It has an upstroke design and is equipped with a safety cage and emergency stop.



## SUSTAINABILITY

Our laboratory presses are known for their long – 20 years or more is no exception – lifespan. What's more, Fontijne Presses provides a wide variety of solutions – such as upgrade packages with the latest technologies – to improve or rebuild aging presses. This way, the presses remain state-of-the-start for many years. And when the press finally reaches the end of its life cycle, the materials can be recycled.

## SERVICE POLICY

Fontijne Presses' service policy is aimed at keeping machine downtime to an absolute minimum. This is why we have skilled service engineers available that can be deployed all over the world. We also have a full line of original spare parts available for our LabPro range.

## EXTENDED GUARANTEE & MAINTENANCE PLAN

Upon request, the standard guarantee period can be extended. Fontijne Presses also offers preventive maintenance and a calibration service.

## REFERENCES

Our presses are used in many laboratories and R&D departments around the world.



## OPTIONS

By selecting the right options for your LabPro press, its area of application can be customized and optimized.

### HEATING CAPACITY TO 700°C

The heating capacity of the LabPro can be expanded up to 700° C. This way, a wider range of sample materials can be used.

### FAST HEATING SYSTEM

When this time-saving system is installed, the heating process of the LabPro press can be accelerated to 20°C/min. This saves quite some time, as it only takes 8 minutes to reach 180°C (instead of 16 minutes) or just 19 minutes to reach 400°C (instead of 38 minutes).

### OIL HEATING

Compared with electrical heated platens, oil heated platens can achieve an even more homogenous temperature distribution.

### ACTIVE COOLING SYSTEM

Automated water cooling of the press platens, controlled by electric valves. This way, the press can be deployed swiftly for upcoming tasks that need a lower temperature setpoint. Please note that the cooling system can be made compliant with ASTM D4703 (to achieve a 15°C/min cooling ramp) upon request. The system also cools the frame, keeping the temperature of the case around the ambient temperature.

### CASSETTE COOLING SYSTEM

The cassette cooling system consists of two water cooled platens which can be moved horizontally – either manually or motorized – between the press platens. The cassette system can even move vertically along with the press platens, to allow cooling under pressure. In situations where extremely fast cooling is needed, the cassette cooling system – cooling up to 280°C per minute – is the right solution.

Furthermore, the heated platens will be continuously heated while the cooling platens will be continuously cooled. This method results in much lower energy consumption compared to a traditional approach where the heated platens have to be cooled down after each pressing and then heated again. For the same reason, the cassette system is also timesaving.

## VACUUM SYSTEM

The press chamber can be put under vacuum (30 - 40 mbar) by means of a vacuum pump that is integrated in the LabPro's support table. This way, tests can be performed - even at high temperatures up to 700°C - without oxygen and/or with other gases such as nitrogen or argon. The vacuum conditions can be programmed, and the vacuum pump is controlled by our Programmable or ProView software. After pressing, the press chamber can be easily ventilated. Several additional features, such as a hardened glass window, lighting, electrical feedthroughs or multiple daylighters can be integrated upon request. All modifications are carried out in accordance with CE-regulations and keeping maximum safety in mind.

## CUSTOMIZED 'DAYLIGHT' AND PLATEN SIZES

The dimensions of the daylight (this refers to the opening between the lower and higher platens) and platen sizes – see technical specifications section – can be customized upon request. It's also possible to add extra daylighters, which enables to process a significantly larger number of samples within the same cycle. Each daylight can have its own heating/cooling settings.

## FLOATING UPPER PLATEN FOR ULTRALOW (< 10 kN) PRESS FORCE

A secondary pneumatic system ensures the weightless closure of the floating upper platen. This option is very useful when a low closure force is needed (0 – 10 kN). When the closure force needs to be higher the standard hydraulic system will be used.

## STEEL, ALUMINUM AND COPPER PLATENS

By using optional platens in steel, aluminum or copper, a specific temperature distribution profile can be achieved. In case high specific surface pressures are required, other or especially hardened platen materials can be used as well.

## ADDITIONAL OPTIONS

Your LabPro press can also be equipped with additional options like a roller bed, and light and sound systems to indicate the end of a press cycle.

- Roller bed: consists of ball transfer units allowing to insert the mold more easily.
- Light signal: a light signal on top of the unit indicates the end of a press cycle.
- Sound signal: an acoustic signal indicates when the press cycle is finished.

## CUSTOMIZATION

Please feel free to contact us if you would like to have your press customized according to your specific needs. We gladly make you a personalized offer.

## EXTENDED GUARANTEE & MAINTENANCE PLAN

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## TECHNICAL SPECIFICATIONS

LabPro		
Max. closing force	kN	up to 5000 kN
Platen size	mm	several sizes from 225 x 225 up to 1000 x 1000mm
Daylight opening/stroke	mm	from 100 to 1000mm
Stroke max	mm	1000
Voltage	V	3 x 400V/50 Hz + zero + ground 3 x 480V/60HZ + zero + ground

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