

ROSS & MOUNT

ACCURACY & RELIABILITY IN POWER

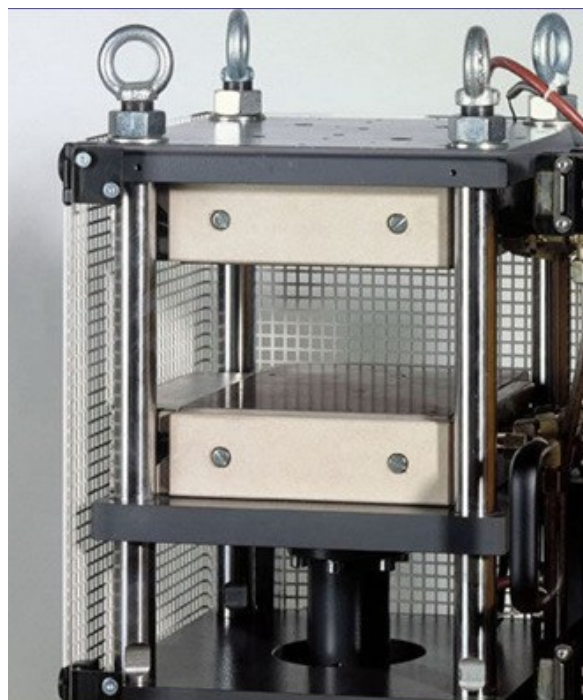
ROSS & MOUNT
TEST EQUIPMENTS

LAB PRESS— LP—1000



FORCE CONTROL AND INTELLIGENCE IN FLUID POWER...

Laboratory Press : Ross & Mount Lab presses provides precise , durable and cost effective performance. This Floor mounted platen press is used in Laboratory compression molding , punching / stenciling , adhesive testing and composite testing . The combination of the press structure with heating systems, hydraulic systems, position measurement, and safety devices come into play to further prove the robustness of press engineering. Tooling can be customized to suit the customer specifications . The day lights can be manually adjustable to suit the optimum operation of the press . Manual Stoppers are provided to adjust the variable stroke / Day light .



- **Data interface systems**
- **Light curtains**
- **Alarm options**
- **Mold heat temperature controllers**
- **Platen display lighting**

Specifications	LP-100	LP-200	LP-300	LP-500	LP-1000	LP-2000
Clamp force (KN)	100	200	300	500	1000	2000
Platen size(in mm x mm)	200x 200 300 x 300	200 x 200 300x 300	300 x 300 400 x 400	400 x 400 500x 500	500 x 500 600 x 600	600 x 600 800 x 800
Max.Daylight Opening (mm)	250	300	300	400	500	1000
Min. Daylight Opening (mm)	15	20	20	40	100	150
Std. Temp of Platen (Celcius)	250	250	250	250	250	250
Max.Temp of Platen (Optional)	350	350	350	350	350	350
Opening stroke of platen(mm)	235	280	280	360	400	850
Max. Power of Motor (KW)	1.25	1.25	2.2	2.2	3.75	5
Heater Elements (KW)	3	3	5	8	12	18
Accu. of temp within (Celcius)	5	5	5	5	5	5
Prec. temp within (Celcius)	1	1	1	1	1	1
Weight of Press (Kg)	600	800	1000	1600	2000	4000
Dimensions (mm) x mm x mm (Length X Width X Height)	1600 x 1300 x 1400	1600 x 1300x 1500	1800 x 1600 x 1600	1800 x 1600x 1800	1900 x 1900 x 2000	2500 x 2500 x 2800

Rubber

To examine the quality of rubber, a sample is taken from production batch and pressed into this die. All presses are designed specifically for rubber applications according to ASTM D 3182 and ISO 2393. The two aforementioned test standards require presses to have to have strict platen parallelism, specific closing force, thermal distribution and temperature accuracy. The degree of customization sometimes needed is pushing for newly engineered options.

- Custom tie rods
- Automated platen shuttles
- Variety of daylight options
- Sliding or tilting platens
- Custom mould mounts
- Ejection systems
- Work tables



Polymers

Our laboratory presses are widely used for the preparation of polymer samples, such as PE, PP, PS, ABS and many more. In order to precisely determine the physical properties of polymers, samples that are pressed under accurately controlled conditions (following international standards) are needed. This way, properties like tensile strength, flexure and impact can be tested. Furthermore, compression moulded polymer samples are also used for colour testing, weathering and XRF analysis. Using the active water-cooling circuit, the press platens can be cooled swiftly. This allows to use the unit for upcoming tasks that need a lower temperature setpoint, without losing valuable time. The active water cooling option includes an air blow system which uses compressed air to clean the cooling channels of the press platens. This way, dirt can be prevented from settling in the channels.

Composites & Fuel Cells

Our presses enable industry leading research into composite materials. They assist your investigation to develop cost effective manufacturing technology for lightweight composite structures. Used in aerospace (unmanned aircraft structures) and automotive (sports car bodies) industries. These forming presses allow **low force testing** and a **supervision system** can be added (option). Therefore, this range meets most market needs for composite material development.

The automatic hydraulic LP-200 press is designed for IR and XRF laboratory sample preparation and is compatible with a variety of sample-preparation accessories, including dies and heated platens. Furthermore, Ross & Mount is a familiar name in universities where the presses are used for educational and research purposes.

**Ceramics • Composites • Construction Materials •
Cosmetics • Drugs & Pharmaceuticals • Powder
Metals • Printed Circuit Boards • Rubber • Polypropylene Composites • Polypropylene • Credit Cards •
ID cards • Plaques • Silicone • Elastomers • Soil,
thermoplastic resins and thermosets**

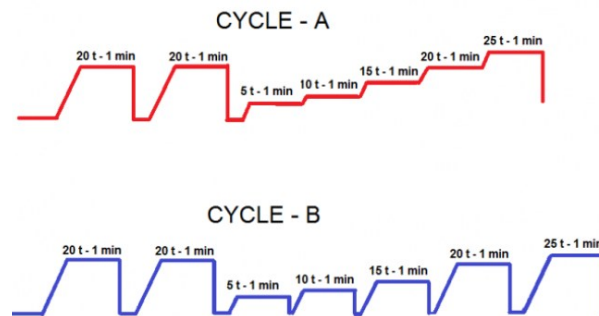


Additional options

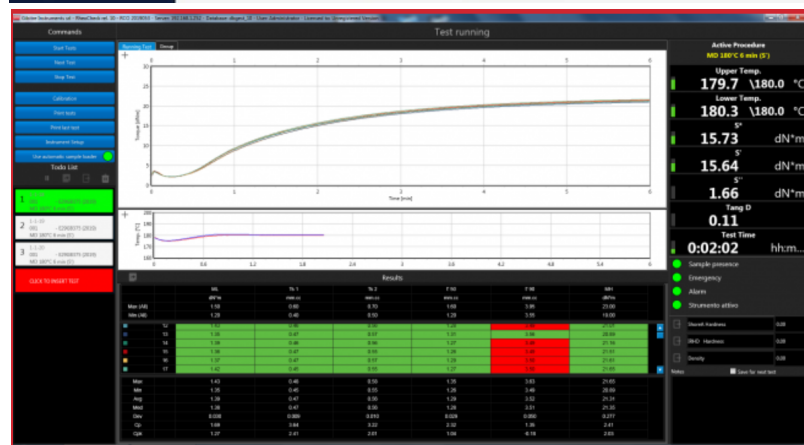
- Roller bed: consists of ball transfer units allowing to insert the mold more easily.
- Exhaust/extraction hood: sits on top of the press and can be connected to an existing exhaust system, using the $\varnothing 200$ mm connection flange.
- Automatic venting cycle/degassing stroke: allows to vent the unit, by automatically open and close – after a preset period of time – the press. From 1 to 99 venting cycles.
- 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.



Ross Automatic press is fully programmable and easy to use, and suited for a wide range of applications in laboratories as well as in heavy industrial settings. Applies loads up to 40 tons Programmable microprocessor controlled pressure application and release Simple user operation procedures via symbols and prompts Maintain load applied with automatic "top up" Colour, touch screen LCD display with LED backlight Multi-lingual display options End of cycle alarm or indication Large working distance between pressing surfaces Low noise operation Integral high clarity PETG safety guard Fully CE Marked



- Cycle programming
- Pressure - Temperature
- Steps - Degassing
- Data display
- Defects display
- Software and data acquisition system—Industry 4.0
- Program storage - Continuous data acquisition
- Pre-selectable hysteresis of the pressure requirements for individual precision adjustments
- Pressure overshoots at swelling or expandable sample materials will be acknowledged and automatically adapted
- Computer connection to an external computer by LAN or WLAN for access to the machine as well as analogue data display Protective door and protective hood above the pressing unit for powders, vapours or shearing test materials



The Digital pressure regulation system is designed for applications that require an accurate control of closure force.

A specific 2-stages hydraulic circuit, which includes proportional regulation valves and continuous fine regulation pumping system, has been designed to ensure accurate pressure control.

The results is a smooth and consistent force control which permit to set the closure force between 10 kN and 2000 kN with 10 N set force regulation steps with regulation oscillations lower than 1000 N.

The control of the closing force is performed using the Automatic Press Control that must be installed in combination with the Closure Force Control option.

The Automatic Press Control device permits to set multiple pressure regulation steps within the moulding cycle.



- ***Compact Hydraulic unit***
- ***Lower pressure systems***
- ***Increased cylinder stroke***
- ***Electronically controlled contact gauges for increased energy efficiency & press noise reduction***
- ***Custom ejection cylinder for molded part removal***
- ***Silent Pump—Motor Assembly less than 55 DB***

- **Homogeneous temperature distribution, with deviations of up to ± 0.54 °F**
- **Temperatures of up to 800 °F**
- **Heating/cooling rates of up to 90 °F/min**
- **Platen evenness of up to 0.1 mm**
- **Acoustic insulation**
- **Process-specific suction**
- **Compact, modular design**
- **Easy to maintain**
- **Heating, cooling of the plates is possible also under pressure**
- **Chromated Platens—To avoid sticking of samples to the platens at higher temperature settings,**



Fast heating system

When this system is installed, the heating process of Ross presses can be accelerated to 20°C/min. This saves time considerably ,

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) as an option .

Multiple 'daylights'

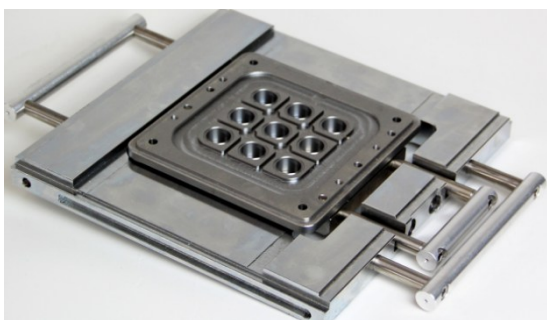
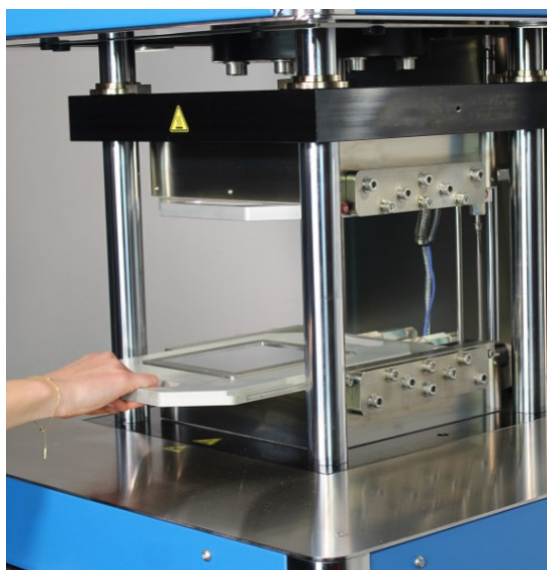
By adding extra daylight – this refers to the opening between the lower and higher platens –, a significantly larger number of samples can be processed within the same cycle. Each daylight can have its own heating/cooling settings.

Steel, aluminum and copper platens

By using optional platens in steel, aluminum or copper, a specific temperature distribution profile can be achieved.

Platen & Custom Mould Options:

- **Custom Moulds with additional heating zones**
- **Increased platen temperature ranges**
- **Air / Water cooled platens or other heating options**
- **Heater timers and cycle counters**
- **Supervised safety doors, left, front and backsides**
- **Safety Temperature limiters**
- **LED status signals**
- **Lock-out tag-outs**
- **Other operational features**
- **Operator ergonomic options**





ROSS & MOUNT



**INNOVATION POWERED
BY TECHNOLOGY ...**

ROSS & MOUNT TECHNOLOGY CENTER

At the technology center of Ross & Mount , Cologne , Germany . We bloom the innovation powered by cutting edge technology. The engineering system follows the standards in all their designs to ensure reliability at all levels of product designs .

The Ross & Mount products pass through all the extreme testing environments before reaching the equipment's and plants of the customer. Our set of proud customers prefers our products as their first choice for sub assemblies , proves our products reliability and integrity in all our relations .

Our technology team supports Valuable customers in selection of right assemblies , integration supports and Engineering to deliver products with Engineered Reliability.



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