

G9

a new generation is born



FILE G9 **P2**



FILE H 58 **P4**



SOFTWARE **P6**



file

In 1998, in Düsseldorf, REP presented the first G8 generation rubber injection presses, the result of an in-depth survey of our customers' daily requirements. Today, REP is continuing its research of the market requirements, with particular emphasis on productivity. It is in this spirit that the V79 presented below, opens a new page in our activities and introduces the G9 generation, which will gradually extend to all REP presses.

G9

V79 | Enhanced ergonomics, user-friendly control... and even greater productivity

V79: a new product in the REP range

After defining the principles of the new G9 generation, we decided to apply them not to an existing press but to a new creation "from scratch": the V79. The V79 is a 5000 kN vertical injection press, and this closing force is entirely new to our range. This type of press usually causes ergonomic problems to which the "G9 thinking" brings a number of innovative solutions.

Ergonomics, productivity, and user-friendly controls: the three key features of the V79.

While the V79 was being developed, all the mechanical, hydraulic, electrical and general control problems were reviewed to achieve this threefold objective.

Ergonomics

Normally, a vertical press of this force (5 000 kN) requires special adaptations (e.g. a platform for the operator) or a dedicated installation (a pit for the press). The V79 dismisses these requirements with a new closing principle; hence the V79 can easily be relocated to meet any production demands. The ergonomics and the accessibility of the closing and injection units are quite simply unequalled.

The mold thickness adjustment is automatic. The movable traverse heating platen is at operator height (860 mm or 33.9"). The working height is fixed and doesn't depend on the mold height.

The same thinking has been extended for the access to the top traverse and to the extruder feed, which has been brought down to a height that doesn't require any steps or ladder (1.895 and 2.090 m).

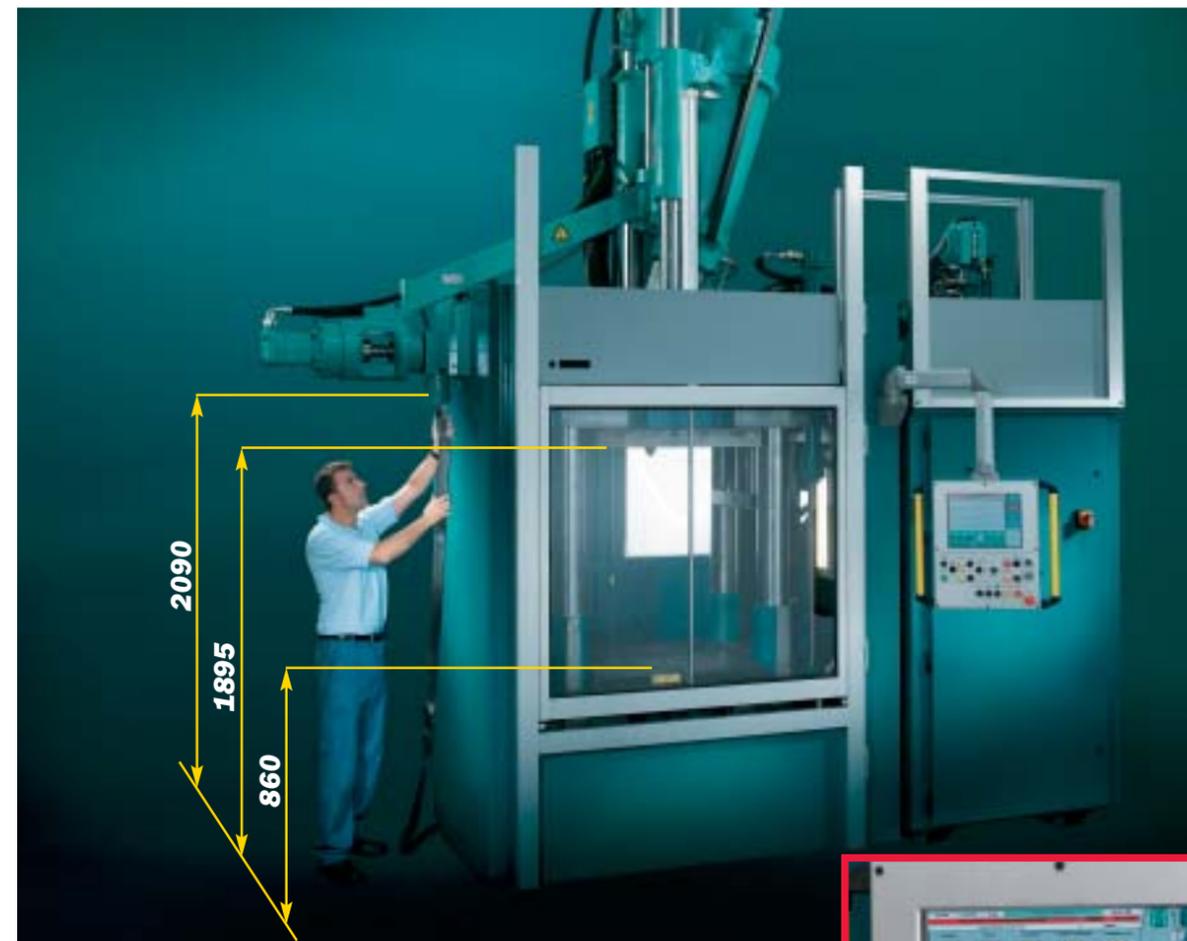
Productivity

Dry cycle time has been reduced, in result of the improvements of the closing unit, the hydraulics and the controls. This gain of time is due to faster approach and closing movements and mold plate handling movements that are synchronized and done in masked time.



In addition the production change time is also reduced:

- Automatic mold thickness adjustment;
 - Automatic speed and stroke adjustment for the opening and closing;
 - Elimination of the stroke adjustment on the frame and the hydraulic ejectors;
 - Easy and fast cleaning of the injection unit;
 - Mastertrac® 4 (see page 8 of this REPNEWS)
- The above improvements make the V79 particularly productive.



User-friendly controls

The G8 generation introduced highly intuitive process control associated with specific software for process control, self-teaching, and diagnostic. The V79 keeps all of these features and its interface retains the principles of the previous generation. The display presentation is similar to that of the G8, to facilitate the transition to the G9.

Standard presses feature the Mastertrac® 4 and Thermotrac® 3 software as well as the Isothermould system, and the other REP software modules are compatible with this new generation (see pages 6, 7 & 8 of this REPNEWS).

In addition to the continuation of the G8 technology, the V79 introduces numerous innovations:

- The keyboard has been replaced by a 15" clear and highly functional tactile screen;
- For the operator: self-explanatory graphics, intuitive handling and enhanced readability;
- For the process engineer: faster and easier process adjustment, easy access programming tools;
- Communication with the peripherals is very open, which allows for an easy integration of the press into a work cell. The V79 uses a field bus for this function.



▲ Interface access levels differentiated according to the user, also protected and configurable. Different possible access modes:

- Access code (password)
- Physical device (USB key)
- Control console

V79/500
Closing force: 5 000 kN
Heating plates: 800 x 800 mm
Injectable volume: 1 000 - 2 000 - 4 000 - 6 400 and 8 500 cc at 1500 bar

G9

news

new H 58

the horizontal range is increasing from the top



With the launch of the H58, REP is adding a higher-performance press to its range of G8 horizontal injection presses.

"... accessibility, ease of cleaning and easy installation of a conveyor belt within the open support frame."

The H58 has a closing force of 3000 kN. Intended primarily for automated production, it offers the advantage of a very short cycle time, integrated central ejector and excellent reliability.

Like its "little sisters", the H58 is fully integrated into the G8 range and includes accessibility, ease of cleaning and easy installation of a conveyor belt within the open support frame.

The horizontal range now offers a logical progression of the closing forces: 1013 kN (H38), 1930 kN (H48), 3000 kN (H58) and a 4000 kN press (H68) presently in development. It covers the vast majority of requirements for this type of press.

H58/300

Closing force: 3 000 kN

Heating plates: 550 x 550 mm

Distance between columns: 580 x 580 mm

Inject able volume:

1 000 and 2000 cc at 1500 bar

The simultaneous plates exchange Kit:

the optimised double plate

The double plate principle provides an appreciable gain in time, particularly when it is necessary to place inserts in the mold. REP offers a kit that makes this system even more productive with the simultaneous exchange of both plates. This cuts down the plate exchange time by half.

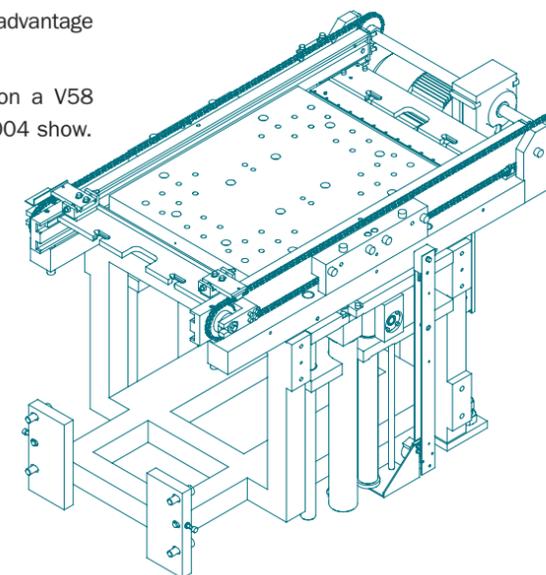
The kit is modular and therefore may or may not incorporate an optional heating plate. This feature also improves productivity by maintaining the mold temperature during the part de-molding and insert loading. The curing time remains extremely stable.

It can be adapted to the existing G8 presses (V48, V58 and V68) as well as to future presses in the G9 range.

In this configuration, a press can operate with two bottom molds like a shuttle press with the huge advantage of a single operator station.

This kit will be presented on a V58 press at the Düsseldorf K2004 show.

"... REP offers a kit that makes this system even more productive with the simultaneous exchange of both plates. This cuts down the plate exchange time by half."



software **rep**

developed to get the best out of your presses

At REP, all the software developments are made in conjunction with the design of the rubber injection presses to provide efficient overall solutions. As a general rule, these new software developments are compatible with most of the existing presses and those currently being developed, which in turn allows for the evolution the production units at Rep's customers.

Isothermould

temperature regulation to optimise curing



With standard heating platens, curing time has to take temperature variations into account, which often means that it is overestimated. This causes a loss of both, time and quality, and has led REP to develop the exclusive Isothermould system.

Distributed power heater platens to minimise temperature differences

The Isothermould principle consists of supplying heat where it is lacking. This localised heating is obtained by means of distributed heater cartridges.

The system limits the temperature difference at the mold parting line, with

variations not greater than $\pm 2.5^{\circ}\text{C}$ (compared with 10°C using conventional platens).

The result

► **Enhanced quality** due to tighter molding characteristic tolerances and a 40% reduction in the dispersion of these characteristics;

► **Increased productivity** with a reduction of up to 20% in curing time.

Isothermould is now standard on our presses and can be retrofitted.

Remote Diagnostic REP

a guardian angel for your presses

When a malfunction occurs, the fault needs to be found very rapidly to keep production downtime to a minimum. In this context, nothing is more effective than remote diagnostic, with no need for a service engineer and immediate analysis of the problem. The most effective corrective action can be taken very quickly.

Action initiated by the user

The principle of remote diagnostics consists of assigning an "address" specific to each press so that a REP technician can display the press screen on his remote computer. Only the user, who gives his approval for any remote action, can establish this link. In this fashion, both

confidentiality and production control remain unaffected.

This service is a major asset where productivity is concerned and it can be implemented for existing presses or for a new press.



RepNet-win®

an efficient network

Networking up to 60 REP injection presses to a central terminal, comparing the molding parameters in real time with the settings, transferring them from one press to another: RepNet-win® software enables the user to perform all these operations with exceptional ease.

In succeeding to Repnet® and Repnext®, RepNet-win® uses Windows, which permits, to take just one example, that production data can easily be retrieved in an Excel format. It is so user-friendly that a beginner can learn how to use it very quickly. It has

been designed for maximum compatibility with all REP presses, past, present and future. This is an ideal supervision tool to manage your production very simply.

"This is an ideal supervision tool to manage your production very simply."



Mastertrac[®] 4

| programming through learning

Over and above the basic kinematics, a press must be able to provide a specific cycle to a mold very easily. Mastertrac[®] achieves this through its teaching mode system, with the software performing two functions:

- ▶ The memorizing of sequences defined by the operator;
- ▶ The utilization of this cycle by the press.

Mastertrac[®] 4, the latest version, extends the cycle modification to include the opening and closing phases. It is very flexible and allows for numerous variations such as intermediate stops and time delays.

Mastertrac[®] 4 is compatible with G8 presses and the new G9's.



8

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