

PRESS RELEASE

Altdorf – Germany / August 2022



LWB Steinl at the K-2022

A "grow as you go" injection molding system, innovative large machines and a new control system

At K-2022 the Bavarian machine manufacturer LWB Steinl will present the latest version of its highly flexible multi-station elastomer injection molding system, which has already attracted great interest at DKT-2022.

Other topics are an innovative large-scale machine technology, in particular its application advantages for the production of large multi-component moldings, and the latest C-frame vertical machine featuring an updated version of the flexEVO machine control.

The central exhibit of the LWB Group in Hall 14 / Booth A 68 will be the current version of the "Multi-station Injection Molding System", which was first introduced in 2019. In contrast to the traditional "all-in-one" injection molding machine, it is a modular system combining one or more, usually smaller, vertical injection molding machines with separate heating / cooling or postprocessing stations. Within the system, just cavity plates instead of complete molds are transferred, by means of one or more industrial robots in a circuit between the system modules. This allows for running heating or cooling times in parallel to the machine, freeing up capacity in the machine for additional injection cycles. The central idea is to offer the user a production system that can work with the same (small) mold size from the prototype phase to series production. This is possible by increasing the number of cavity plates in circulation, geared by the demand. The number of cavity plate-sets is limited by the balance between the maximum possible injection cycles of the machine and the heating or cooling times of the cavity sets, including the transfer times. This makes the multi-station system an alternative to the traditional all-in-one-machine, which would at project start have to be combined with a multi-cavity mold already designed for subsequent series production.

However, the LWB multi-station concept not only offers advantages when ramping up production numbers, but also when call-off quantities decrease. This is because, conversely, individual exchangeable mold sets can in stages also be taken out of circulation and the free capacity replenished with similar moldings. Another advantage of the step-by-step adaptation to production requirements is that, unlike a poorly utilized

conventional multi-cavity production cell, the system always consumes only as much energy as corresponds with the smaller production quantity.

The multi-station system is available in combination with almost all vertical machines from LWB. A configuration example will be shown in operation at the booth.

Large vertical machines by LWB for 2K parts production

LWB Steinl, one of the leading suppliers of vertical machines for processing elastomer materials, has in recent years increasingly established itself in the sector of vertical machines for thermoplastics. Here in particular with the LWB-specific VR (vertical/frame) series. It occupies a special position between the tie-bar-less C-frame machines and the conventional tie-bar machines. VR machines are also tie-bar-less, but the structures for absorbing the clamping force are thick-plate steel frame elements. Their dimensions can be flexibly adapted to the individual task at hand without being restricted by predefined casting components.

The potential of the concept is demonstrated by a virtual demonstration at the booth of a 2-injection-unit-machine with a horizontal rotary table with a diameter of 2.7 m, which can accommodate molds up to 27 t weight with platen sizes in the range of up to 2.2 x 1.6 m or 2.0 x 1.8 m. Due to the horizontal rotary table and the vertical introduction of the clamping force via four balanced pressure pads, the LWB-concept is superior to conventional horizontal machines with vertical rotary tables because no unilateral weight influences have a wear-promoting effect on the rotary table bearings and the rotary media unions (Fig.2).

Additional advantages of the VR-concept are the easily accessible injection units on top of the gantry frame modules, as well as the significantly smaller footprint compared to conventional horizontal machines. Another advantage is the unobstructed access to the product area in the injection mold which is at a low height above floor level, which means that a standard robot positioned next to the machine is sufficient for part manipulation.

Vertical C-frame machine with the latest flexEVO machine control

The second Live-exhibit will be a vertical C-frame machine with 500 kN clamping force, demonstrating the processing of a natural fiber-reinforced bio-based thermoplastic material from Biofibre GmbH (part of the LWB-group). The machine shown will be equipped with the latest version of the flexEVO-control, which offers further networking possibilities within a digital production infrastructure (Fig.3).



LWB Steinl at the K-2019 / Hall 14 – Stand A 68

Figures:



Photo: LWB Steinl

Fig.1: Configuration example of the modular LWB-multi-station-injection molding system



Photo: LWB Steinl

Fig.2: A vertical portal frame machine with integrated rotary table has proven to be an advantageous alternative to conventional horizontal 2-component injection molding machines.



Photo: LWB Steinl

Fig.3: Vertical LWB C-frame machine with the latest version of the flexEVO machine control. The C-frame-specific good accessibility of the mold area, qualifies it specifically for over-molding inserts or for the assembly of profiles.

about the Steinl-Group

Founded in 1962 by Alfred Steinl, the company is now managed by the second generation of the Steinl family and is one of the world's leading manufacturers of rubber presses and injection molding machines. The product portfolio includes the complete range of rubber and plastic injection molding machines, from vertical C-frame machines to vertical 4-column or plate frame machines, to horizontal machines in column and C-frame design.

LWB-Steinl currently employs around 210 people and builds around 340 machines per year.

In total, the Steinl Group currently consists of seven companies, which are divided into four divisions. The largest division is Mechanical Engineering, consisting of LWB-Machinery, LWB-Automation, the batch-off cooling system manufacturer Prodicon International Srl and the injection molding machine manufacturer URP (United Rubber & Plastic Machinery Ltd. in Langfang/China. In the stamping technology division, STG-Carrier GmbH produces metal scaffolding strips for automotive sealing profiles. The third division is Sealing and Bonding Technology with Dreibond GmbH, a manufacturer of adhesive systems and the necessary application technology. The fourth division is the biomaterial production of the Biofibre GmbH in Altdorf with its subsidiary Naftex GmbH in Wiesmoor / Lower Saxony.

More under: www.lwb-steinl.de

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