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Maplan focuses on energy efficiency, automation and QS systems for LSR, rubber and TPE processing at Fakuma

At Fakuma 2012 Maplan presents three elastomer processing machines. As a technical highlight the Austrian machinery supplier announced to show a liquid silicone rubber application: a MHF400/200 edition with SILjector injection unit. The other machines at the Fakuma stand address the processing of TPE: the vertically clamping MTF220P/160 editionS and a MTTF100P/40C in C-frame construction for corner overmoulding.

The company said that it can cover a variety of requirements set by the processers with its modular system. With it, one can combine TPE injection units up to size 350 with clamping units ranging between 270 – 4,000 kN. All Maplan machines for TPE processing are equipped with CoolDrive II drives as standard.

Horizontal MHF400/200edition with the SILjector-injection unit for LSR

The MHF400/200edition exhibit with 2.000kN clamp force includes the latest generation of control devices, the PC5000touch V3 with a number of new features. A high-precision SILjector-injection unit working according to the FIFO-principle with active backflow barrier and greatest dosing accuracy at 100ccm dosage volume is employed for LSR-processing. The unit is available with a volume of 100, 200 and 400ccm and built extremely compactly. The way the SILjector-injection unit is constructed allows a simple and fast cleaning of the machine for fast rubber compound change. The injection pressure is 2.041 bar for the 100ccm version. Optional for this LSR process is a hydraulic needle shut-off nozzle, which is specifically tempered (liquid-cooled/ -heated). With this application Maplan positions itself in relation to LSR. The LSR dosage system TOP3000S comes from Elmet. The machine is equipped with a hydraulic lifting unit, a central ejector and an active control of a double hydraulic needle shut-off nozzle. The 2-cavity-mould has been built by Ro-Ra Moulds. Liquid silicone rubber bracelets will be produced. In order to address the topic of automation, a Wittman servo-robot W818 with removal gripper by Ro-Ra is employed the remove the bracelets. Analogous to the vertical injection moulding machines, horizontal machines are also available as "edition" and "edition-S" versions at Maplan. Currently available are models with 100, 200, 300 and 400 tons clamp force.

Vertical TPE machine with high repeatability

The vertically clamping holm-constructed MTF220P/160editionS with CoolDrive II-drive shown in Friedrichshafen shows a FIFO-injection unit with a dosage volume of 220 cm^3 . With a footprint of only 2.4m^2, the edition series offers high performance while requiring only very little space. Maplan will show the production of a protection mask made of thermoplastic elastomer with a single-cavity mould by Tris Stampi from Montelupone (Italy). All machines of the "editionS" series - up to a clamp force of 4,000kN- are available with optional injection units for thermoplastic elastomer.

C-frame construction for corner overmoulding with TPE

As third exhibit, Maplan displays a MTTF100P/40C in C-frame construction (401 kN clamp force). Equipped with the current control version, the PC5000touch V3, and the energy-saving CoolDrive II-drive, this machine also includes a hydraulic lifting unit and a hydraulic mould run out for the best process design possible. This is a vertical elastomer machine that injects and clamps from top. The holmless C-frame is characterized by its small footprint of 2.3m^2 and its very high rigidity. Maplan C-frame machines offer many advantages, especially when it comes to ergonomics and handling: they allow the operator free access to the mould mounting area. Machines of this kind are predestined for corner vulcanization, sealing elements, molded parts, end caps and two-component parts. As an alternative to vulcanization, there will also be a TPE version in the shape of a thermoplastic-compatible injection unit exhibited at the Fakuma. The tool comes from Henniges Automotive. "Corner vulcanization is a key word under which we will show at the Fakuma that we provide modular solution for elastomers as well as for TPE," Rudolf Eisenhuber states.

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