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BOY injection moulding machines now hybrid

For the first time the medium-sized machine manufacturer located in Neustadt-Fernthal presents an optional, servo-electric drive for the injection unit (eSP) of its BOY injection moulding machines at its booth in Hall 13.

Martin Kaiser, BOY-Design Manager, explains the new option for machine sizes from BOY 60 E to BOY 125 E: With the entirely new developed injection unit with the international size SP170, the injection and metering movements are electromechanically driven by two servomotors. Integrated in this development of the new Servo-Plast-Unit are the experiences with the construction of hydraulic injection units from BOY with those of the suppliers of the highest quality drive components. The result is an optimum constellation of drive components such as spindle, bearing, motors and converters, installed into a high quality cast construction. The extremely stiff designed injection axis guarantees maximum precision and repetitive accuracy. In combination with state-of-the-art force-measuring-technology in an optimal arrangement (patent pending), the highest accuracy in maintaining the switching-points of the set injection process is guaranteed within a tolerance of +/- 0.01 mm.

The primary advantage of the eSP technology, however, is the independent operation of the injection unit. The rotational and axial movements of the new



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Servo-Plast-Unit are carried out by two servo-motors - completely independent of the machine hydraulics. This is an advantage for short cycle times and high metering quantities.

Visitors to the K 2019 can experience this drive-alternative on a BOY 100 E for the first time.

The BOY injection moulding machine presented on the K 2019 has a second servo- pump. All movements of the injection moulding process such as ejector, core pull, metering, injection and mould can be controlled **simultaneously** via the four independent servo-motor drive axes. The injection moulding machine with a clamping force of 1,000 kN produces pharmaceutical measuring cups according to material requirements in accordance with ISO 10 993 on an 8-cavity mould. Via an encapsulated conveyor belt, the measuring cups are transported to a tubular bag packaging machine. The new and more compact design of the BOY 100 E will also be presented at the fair in Düsseldorf. Compared to the predecessor model, the machine length is reduced by 460 mm; this corresponds to a new footprint of only 4.62 m².

The optional Servo-Plast-Units can be ordered from BOY as an eSP option at the beginning of the new year. These machine types are labeled with the name affix "**hybrid**".



Servo – Plast



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