

Heidelberg Modifies Solutions For In-Mould Labelling And Announces Other Integrations

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A new IML Performance Package for the Speedmaster XL 106 boosts productivity by up to 15 percent.

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Cutting-edge, increasingly efficient manufacturing processes are a further growth factor for the in-mould label market. Heidelberg is stepping up its investment in the development of new technologies for in-mould label (IML) production. The latest advancement from Heidelberg is a new IML Performance Package for the 2020 generation Speedmaster XL 106 with fully automatic presetting of all key print job parameters.

Special modifications to the feeder and delivery, modified sheet transfer and anti-static devices make it possible to reliably process delicate plastic films just 50 microns thick at speeds of up to 14,000 sheets per hour. The high-performance model for conventional offset printing is equipped with three Y units (drying units) and a delivery with only one extension module. Even with extremely thin substrates, customers benefit from reliable sheet guidance and smooth travel through the press.

The dryer modules are perfectly coordinated with the sheet travel and achieve outstanding drying results at maximum speeds. Distances for paper travel in the delivery remain short

and, even at high speeds, sheets are completely stable when deposited on the delivery pile. The configuration with three Y units and highly efficient round-nozzle technology increases the drying capacity by 25 percent and also saves on energy costs, because the distance between the dryer modules and the substrate can be kept to a minimum.



The redesigned CutStar generation 4 is the basic prerequisite for processing thin substrates at consistently higher speeds. The sheeter is fully integrated into the Prinect workflow and the Intellistart system on the press for production based on the Push to Stop principle. The format and air values are adjusted fully automatically based on the job data.

These settings can be saved and loaded with the print job for repeat orders. A further innovation is the special corona surface treatment integrated into the CutStar, which improves the wettability of plastic materials and makes them easier to print on than untreated materials. The enhanced ink adherence ensures long-lasting, consistently high quality.

Another part of the IML Performance Package is the Speedmaster XL 106-D rotary die cutter, which now has only one die-cutting unit. Lower investment costs compared with the previous version means it is easier for print shops to move into the growing in-mould label production segment. The new die cutter requires less space and has a lower power consumption than the Speedmaster XL 106-DD. It is ideal for die-cutting large and nested label shapes.

Thanks to its rotary die-cutting principle, the Speedmaster XL 106-D operates at two or three times the speed of flatbed die cutters. The high precision resulting from the even cylinder surface and evenly cutting die eliminates the makeready required due to differences in level when using the flatbed process. This time-consuming step is not necessary and minimises the setup time. The printing pressure can be adjusted in increments of just one micron on the Speedmaster XL 106-D. Corrections are possible both parallel and diagonal to the cylinder axis. This fine adjustment makes Heidelberg rotary die cutters perfect for in-mould label production on material just 50 microns thick.

The Speedmaster XL 106-D complements the existing portfolio of rotary die cutters, from the Speedmaster XL 106-DD and the option magnetic cylinder with extraction system for cutting holes.

In collaboration with its partner Masterworks, Heidelberg is adding another winning solution to its postpress equipment for the equally attractive growth segment of folding carton production. The Mastermatrix 106 CSB high-performance die cutter for folding carton production was unveiled in October 2020 and series production has now started following successful field testing. A speed of 9000 sheets per hour makes the Mastermatrix 106 the most productive die cutter in the Heidelberg portfolio.

It combines die cutting, stripping and blanking in a single system. Integration into automatic pallet logistics is also possible. A camshaft drive ensures the platen moves smoothly and

gently right up to the highest output levels, which ensures reliably smooth sheet travel. The MasterSet optical register system aligns sheets precisely before they enter the die-cutting station. The print image and cutting die match perfectly for each and every sheet. MasterSet was developed by Heidelberg and launched by Masterworks. The fully encapsulated servomotors are well protected against paper dust, which is a big advantage.



Heidelberg has integrated the Mastermatrix 106 into its Prinect workflow, which means presettings can be transferred to the die cutter and motorised components can be adjusted and moved into position automatically.

Manual set-up processes are quick and easy to perform. A quick-action clamping device significantly reduces the number of manual steps required to clamp the cutting plate in place. In the blanking station, the pneumatic MasterRake system makes it quick and easy to release the rake rods, move them into position and secure them again for non-stop production.

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