

**TOGETHER WITH
F. LÖFFELMANN GmbH OF
STADTBERGEN, SWABIA
(BAVARIA), BAUMER hhs
HAS DEVELOPED A NEW
SOLUTION FOR GLUING
TRANSPARENT PACKAGING
— IN THIS CASE, FOR
SPARKLING WINE.**

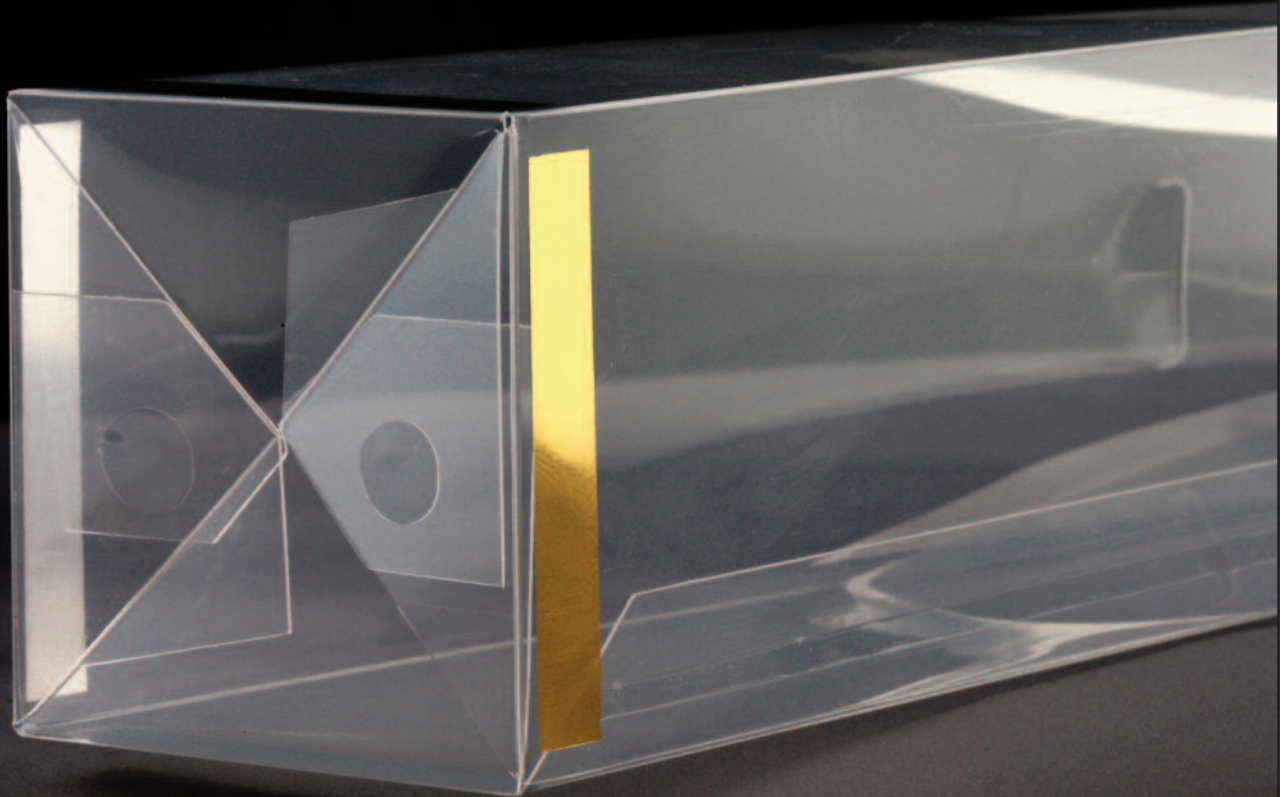
Installation of the new adhesive application system was a revelation for Ferdinand Löffelmann. “The very first transparent boxes glued with the new equipment provided exactly the results I was looking for. The hotmelt application was even and almost invisible.”

Gluing a traditional folding carton is tricky enough if you want to keep up with increasing gluing speeds. However, if it's not cartonboard that you are processing, but colourless, transparent plastic, this presents a few more difficulties than conventional adhesive applicator systems can cope with. Transparent packaging makes everything visible — not just the packaged product, but also the glue track — which should be as inconspicuous as possible. The undesirable

effects of poor gluing include bubbles, tailing and discolouration.

Transparent packaging made of PE, PP, PVC or PET is used increasingly for high-quality products. Löffelmann is of the opinion that packaging should not hide a product — but should increase its perceived value by being visible. Typical markets for crystal-clear packaging are cosmetics and gifts, in addition to the fashion or beverage industries. This type of packaging is particularly widespread in Asia.

Up until now, if both the crash lock bottom and the side seam were to be glued at the same time, the differing gluing requirements were often met by compromising the setting of the process parameters. Whereas a film of adhesive that



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TO HIDE**

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is even and as thin as possible over the entire length of the glue flap is ideal for the side seam, spot gluing that is as concentrated as possible without tailing is best suited for the flaps of the crash lock bottom.

Close co-operation between these two German companies has now resulted in a new solution. Löffelmann now applies crystal clear adhesive with the new Baumer hhs bag melter, which has two separately adjustable supply systems to meet the required different adhesive application methods.

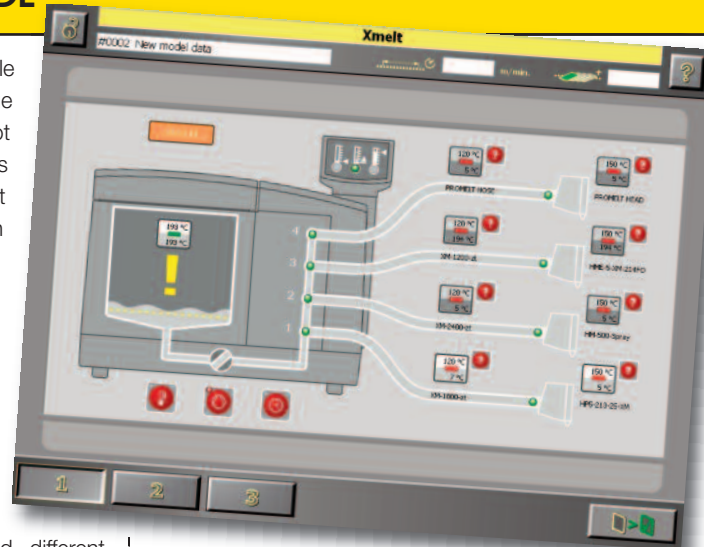
Different processes

The key to success when gluing this type of packaging is two separately adjustable glue supplies in one device. The two dot guns work with high pressure and short opening times so that a circular spot of adhesive is created without tailing. The coating gun for the wafer thin straight line application works in relation to speed and with low pressure. Higher pressure (resulting in a larger quantity of glue) would quickly lead to bubbles in the adhesive — which in the case of plastic packaging cannot escape and would therefore remain permanently visible.

Development Partners

F. Löffelmann GmbH has specialised for many years in the processing of transparent packaging. Numerous trendsetting innovations have been and are being developed together with plastics manufacturers, printing machine manufacturers and innovative customers. On its website, this niche supplier states that it has always been used to breaking new ground and pushing the limits of what is feasible in packaging — typified by its development of modern foil printing back in the 1960's. (www.f-loeffelmann.de)

Over a period of 20 years, Krefeld-based Baumer hhs has become well established world-wide as a gluing specialist and problem solver when off-the-peg solutions do not meet customers' expectations. An above-average sized development department, as well as specialist industry expertise in application technology, service and sales, ensures strong customer orientation. Product range includes pumps or melting devices and a large variety of application guns through to touch screen controllers with integrated sensors for code and glue. They are part of the Swiss Baumer Group, an internationally known manufacturer of sensors and system solutions for the factory and process automation. The family run company employs over 2000 people at 34 sites in 16 countries. (www.baumerhhs.com)



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The gluer must operate at a relatively high speed, so that the micron-thin coating application reaches the press section before cooling. At the same time, the dots for gluing the flaps of the automatic crash lock bottom should not become oval in shape due to high speed. Together with a press section that is more stable than it would normally be when processing cartonboard, the perfect transparent box can be created.

PU adhesive (PUR) often provides the only possibility to achieve a permanent bond with transparent packaging. Despite its high cost, long curing time and high processing requirements, it is



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popular, because after curing the glue dots are crystal clear and no longer susceptible to temperature. PUR is tear-proof and break-proof even at temperatures below zero. However, transparent cartons often need to remain packed under pressure for several days until they need to be used.

PUR adhesive is supplied in welded plastic bags, which prevent any contact with moisture in the air before processing. Once the packaging has been opened, the Xmelt bag melter from Baumer hhs seals the adhesive airtight together with its bag. Due to its closed system, Baumer hhs does not need the previously required adsorption dryer and also requires neither inert gases in the tank nor the extraction of vapours that are harmful to health. Because of the high costs of PUR, great importance is attached to the complete emptying and long storage duration of the opened foil bag. Xmelt ensures this by the exclusion of air and a special press cycle.

Short cleaning time

The Baumer hhs bag melter is equipped with a self-cleaning program. The hood of the tank can be removed without tools, allowing the machine operator to start cleaning without delay. This increases readiness of



the complete unit. All parts that come into contact with the hotmelt are provided with a non-stick coating. Replacing the foil

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cartridge during production is a matter of course. Fast but gentle melting ensures rapid start of production without long waiting times.

As a full member of the Xmelt family, the bag melter recognises the connected guns and hoses via plug-and-play and makes lengthy adjustment redundant. The bag melter can be operated conveniently via the touch screen of an Xtend control and monitoring system. All components merge to form a modular system offering total glue control at full speed.

