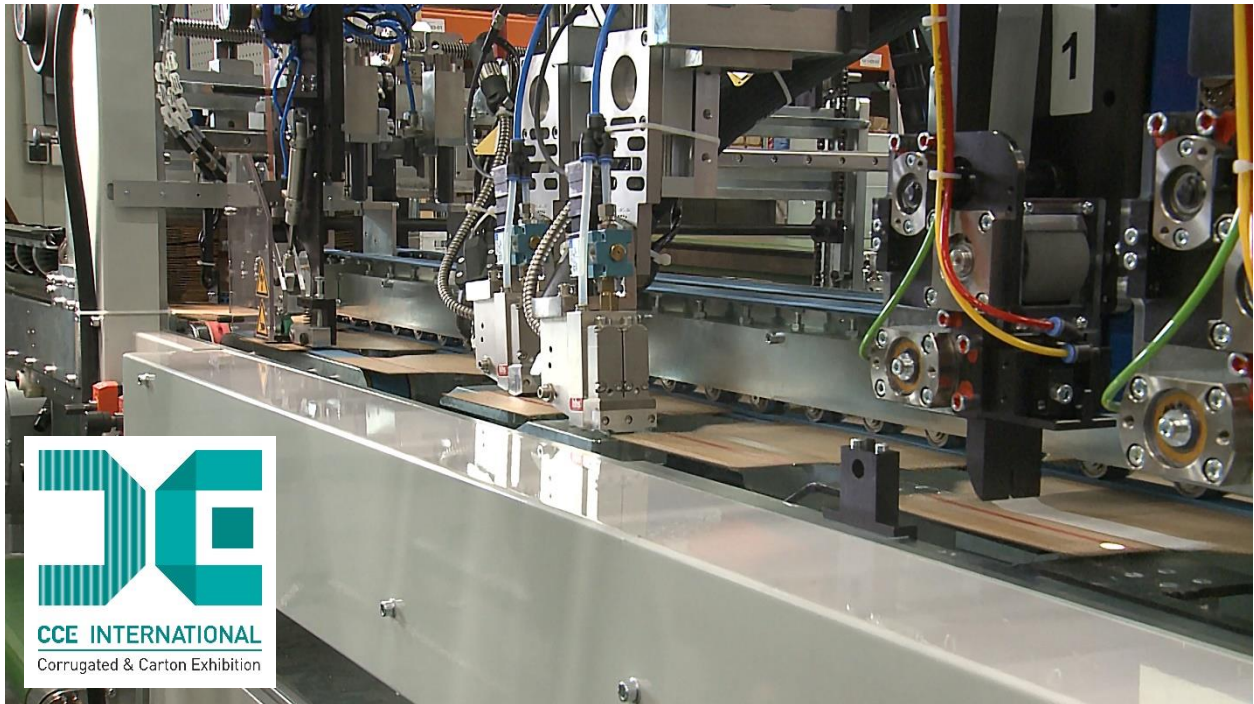


Managing the new normal in packaging with solutions from Baumer hhs



Baumer hhs exhibiting at CCE International / Hall 4A Stand 2440

At CCE international in Munich, from 15 to 17 March 2022, you can talk with our experts about options for applying pressure-sensitive adhesive on thick corrugated board grades, but also about solutions for lightweight shipping boxes.

Packaging companies in future will have to think beyond “must-haves” such as cost, convenience and performance. The McKinsey¹ management consulting firm has defined three requirements that packaging converters will increasingly have to address going forward.

They are:

- A good sustainability narrative,
- Packaging that meets all hygiene requirements, and
- Packaging that is designed for e-commerce and direct selling.

Across much of the world, the buying trend for a long time has been moving away from traditional retail and towards e-commerce. This development has been accelerated by the covid-19 pandemic.

1 McKinsey, Beyond COVID-19: The next normal for packaging design, June 2020.

E-commerce is changing many areas of packaging production simultaneously. Packaging companies must respond if they want to participate in the boom. Market researchers at Smithers Pira estimate that the market for e-commerce packaging will reach EUR 40 billion by 2020, and they expect an average growth rate of 15 percent by 2025. Significantly higher growth rates are expected regionally.

1. Corrugated

In e-commerce, a shift is occurring in the importance of individual packaging features. For example, protecting the contents is becoming a more central focus. Corrugated board is often the material of choice in packaging. It is sustainable, has a high recycling rate (>85%) and enjoys a positive image among consumers. Because corrugated board is impact-resistant, it protects products effectively and hygienically against external influences. It also has a much more favourable ecological footprint.

Another characteristic: Packaging needs to have sufficiently leakproof and durable closures that are easy to open or seal. Having an easy way to re-seal a shipping box is very important for customers, so they can conveniently return goods that do not meet their expectations. The unboxing experience, but also a simple re-sealing function, contribute to a customer's overall positive experience.

Adhesive application system with a new design

Baumer hhs's e-commerce solutions have long been established on the market to promote this experience. The principle: A pressure-sensitive adhesive strip is applied to the corrugated board and then covered with a silicone paper strip. To seal the box, the customer peels off the silicone strip and seals the box with the pressure-sensitive adhesive strip. Baumer hhs was one of the first suppliers to introduce gluing systems that meet the demands of this market segment. Baumer hhs has gained years of experience applying pressure-sensitive adhesives, and incorporated the results in redesigning its gluing system for corrugated applications.

To name just three of these innovations:

- The 100-kg melter has a new tank design for optimum, energy-efficient melting.
- The adhesive flow regulator on the 100-kg melter ensures very uniform feeding and application of adhesives within narrow tolerances and across all speed ranges.
- The fluid mechanics of the nozzle on the proven application head have been re-engineered to support even more uniform application at high glue volumes.

The undulating surface of corrugated board requires consistent and high-quality application of about 250-500g/sqm of adhesive to even out the surface, so that a box can be reliably sealed with little effort by the user.

2. Lightweight shipping boxes

At the same time, consumers are very aware of the amount of packaging involved in e-commerce. The volume of used boxes and plastic materials goes against the requirements of sustainability, making consumers feel guilty about the ecological aspects. Their response is the same when small, usually

lightweight products are packaged with an excessive amount of packing material in big corrugated boxes, generating even more waste.

Considering this situation, it is not surprising that paper-based lightweight boxes and mailers made of solid board or microflute are on the rise. A lightweight blouse does not need to be shipped in a thick corrugated box. A book with high inherent stiffness does not need a thick corrugated pouch. Microflute, solid board and paper are the better choices. Applying less glue is another way to reduce material consumption and costs.

On more even surfaces, like paper, folding carton board and microflute, it suffices to apply only 50 to 150g/sqm of pressure-sensitive adhesive. Applying only as much adhesive as necessary is the efficient and smart alternative both ecologically and economically. However, the requirements on application quality may be higher in this case than for corrugated.

Snuff back – The new coating application head for surfaces with minor unevenness

For these requirements, Baumer hhs has added the HP 500 SB coating application head to round out its product portfolio. “SB” stands for “snuff back”. Snuff back means that the nozzle closes against the direction of adhesive flow, creating a negative pressure that “pulls” the material back inside the head. It has the effect of cutting off the glue flow more rapidly and cleanly, preventing any residual tailing from the nozzle.

The application head can apply 150g/sqm of adhesive in perfect quality. Flat substrates usually require a layer thickness of only 50-100g/sqm. This equipment is combined with an Xmelt hot melt unit dimensioned to suit consumption quantities. The hot melt unit has a frequency converter with high-quality flow regulator. In response to a speed-dependent machine signal, it adjusts the quantity of adhesive within narrow tolerances when speed changes occur.

The position of the nozzle relative to the substrate has a significant impact on the quality of adhesive application. Many packaging producers learned this the hard way, when they chose to go without a variable head mount for cost reasons. In virtually all these cases, they subsequently installed a mount with precision, multi-dimension settings. Baumer hhs has been supplying precision mounts of this kind for over 20 years based on its extensive experience in the coating field.

Components for both systems will be showcased.

Our local Sales team will be happy to tell you more about the opportunities these products have to offer.



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