



E-Commerce Grows Faster Than Expected

The e-commerce business needs packaging that can be handled quickly and reliably. For this purpose, the principle of the self-adhesive closure was discovered by mail order companies around the year 2000.

Established by the major trendsetters, many companies now use the self-adhesive seal. So far mainly used with corrugated and solidboard, it is now more and more used also for paper bags, to remove the need for plastic packaging. Here, a self-adhesive closure is necessary and possible. Release tape is also used in completely different areas; there is great potential in the food industry, for example in the fast-food sector with delivery service. Since there is a fundamental trend towards packaging with as little plastic as possible, more applications will come in future.

In the envelope industry, the self-adhesive seal was used several decades ago, as the machines can work completely mechanically, using a fixed unwind. In the fibre-based packaging industry, sufficiently good and precise servo technology was needed, that delayed its use here. The double-sided adhesive tape that was frequently used in the past is mostly replaced with hotmelt with a silicone paper cover. The main

reasons for this include:

- High material costs, low processing speed, lack of finger lift at the beginning and end, less running meters per roll require more changeovers and downtime;
- The advantage of applying in combination with a multi-point folder-gluer compared to on the corrugator is that there are no punching losses. It can also be applied with the direction of the flute.

As self-adhesive seal can only be applied at high speed in running direction of the silicone paper on machines without a fixed unwind, two methods of application must be made possible in principle.

1. In machine running direction: in this case, all units can usually be accommodated in the folder-gluer. Mostly the units are placed close behind the feeder. After applying tear strip, hot melt and silicone paper, the folding and gluing process is carried out as usual. Whether an extra unit is needed for the aggregates or is installed in an existing unit which is not needed at that moment for the folding process depends on the products to be finished and on the folder gluer itself.
2. In a 90 degree angle different from machine running direction: in this case, there are two possibilities, either turning in the folder-gluer, or in the Enpro WTB (WinkelTransportBand) also called 'angled conveyor

belt'. The WTB is usually placed behind the folder gluer, where it takes the folded boxes from the shingle stream and separates them 90 degrees offset from the folder-gluer, then applies the self-adhesive seal with the appropriate units.

The WTBs can be used to process a wide range of packaging from 30mm thick corrugated boxes to solidboard packaging and 80gsm paper bags. In the WTB, up to two self-adhesive seals are usually applied, with the second one making it easier for the end customer when returning the goods. If necessary, the tear strip can also be applied here.

In combination with the versatile Enpro conveyor belts, the interaction between the folder-gluer and the WTB leaves hardly anything to be desired. The superstructure variant with the most diverse possibilities combines all imaginable application possibilities as follows:

- MPG and WTB can work together inline, without additional staff;
- MPG and WTB can work together as 'manual inline', often avoiding a redesign of the box;
- MPG and WTB can be used independently at the same time.

Of course, the specialised design variants that focus on a specific product range also have their advantages, especially as the systems are extremely modular and can be adapted to new requirements again and again.



The MAS Multi Application System features:

- Silicone paper with hotmelt coating as self-adhesive closure;
- Plastic or paper tear strip with narrow hotmelt coating;
- Reinforcement tape with hotmelt coating for handles;
- Use of disc rollers and cross-wound spools;
- Up to 300 m/min contactless application, no gap required;
- Mobile version.

The TSA Tear Strip Applicator features:

- Self-adhesive plastic tear strip;
- Control via MAS or external control;
- Mobile version.

The Splicer features:

- Fully automatic roll change of non-self-adhesive strips;
- Prototype is in the test phase.

The Comfort traverse features:

- Installation possible in any MPG;
- Applicators can be used easily in any position;

- Can be moved completely out of the MPG.

Enpro was founded in 1997 by Hannes and Albert Slot as a technical service company for the envelope industry. In 2000, the company moved into its first workshop where it could pursue its passion for mechanical engineering. After successfully selling all over Europe, now Enpro is being used in USA, Mexico, Russia and India. Due to the current situation, a delivery stop for Russia has been decided.

In total, over 500 applicators and more than 50 WTBs have been built to date. Worldwide enquiries indicate a continued strong growth. Since the beginning of 2022, a service technician is available 24/7 on the Enpro Service Hotline, online and providing the best possible support using camera glasses.

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