

# CorrBox Solution

**hhs**  
Baumer Group

Prepared for the challenges ahead



Let's stick together

[baumerhhs.com](http://baumerhhs.com)

## Expand your range of usable adhesives

We improve the supply situation to strengthen your delivery capability

High flexibility, cost efficiency and consistent delivery capability – these are critical success factors. Costs are a problem but so is the availability of some adhesives. Customers often have to resort to using alternative adhesives even though they have a negative impact on application and bonding properties.



## Revolutionize your glue monitoring process

We detect defective products quickly and reliably, before they get to customers

Just-in-time methods are widespread in the industry, and they depend on a smoothly operating supply chain. If for instance a carton erector stops multiple times because of defective gluing, it's no wonder the entire production batch usually gets returned to the packaging manufacturer. Re-checking products afterwards ties up resources and greatly reduces profit.



## Equipped for the future

Modern flexo folder gluer production with the unique CorrBox Solution

The packaging industry is under pressure on all sides to make changes. For you as a manufacturer, this means facing new challenges every day in production and product development. Our CorrBox Solution meets tomorrow's demands in the industry today!



## Aim for a production process that is efficient and flexible, even for small batches

We offer you a modular design for a flexible investment

The trend is increasingly shifting from off-shoring to next-shoring, the goal of which is to manufacture in proximity to customers. A customer-centred approach leads to production of ever-smaller, customised batches. In addition, legislation and consumer expectations are also accelerating the trend towards adapted packaging products. For you, this trend means both opportunity and risk: Manufacturing small batches flexibly and close to customers gives you competitive advantages, but also makes you more strongly interlinked with your customers.



## Meet all food safety requirements in production

We make it possible for you to eliminate additives in adhesives, which also cuts costs

Corrugated packaging can contribute significantly to reducing food waste and food loss. Substances used in packaging production have to be safe and must not contaminate food in any way. As a producer, you are responsible for guaranteeing quality, safety and hygiene, not only of the food, but also of the packaging.

## React to rising costs and a volatile market with confidence

We improve your adhesive cost situation

The explosion in prices has led to tremendous cost pressure in the industry. Costs for paper substrates and energy, but also for adhesives, rose by up to 300 percent in 2021 alone.

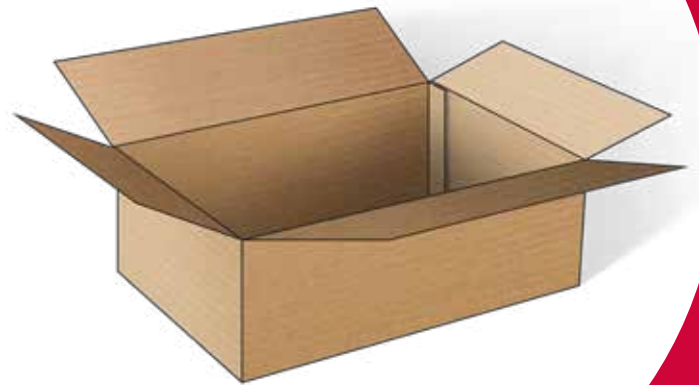
## Fill staffing gaps fast and without high onboarding costs

We have simplified our operating system

The shortage of skilled workers is a major issue today worldwide, and it will undoubtedly become more serious in future. Fluctuation is very high particularly among workers who are unskilled or have low-level qualifications. So it is all the more important to have access to a large pool of applicants. The number of potential workers increases significantly when qualifications and language requirements are lowered.



You too can benefit from the innovativeness and quality of our system components for gluing, monitoring and control. Our latest technologies and sustainable products give you a technological lead and promote your business success.



## You can easily boost eco-efficiency in corrugated packaging production

We can help you reduce pollutants and cut costs at the same time

Eco-efficiency means achieving higher output using fewer resources and mitigating environmental impacts by avoiding pollutants: In other words, a corrugated manufacturer reduces both its production costs and its impact on the environment. As many as 92 percent of consumers today consider this an important factor. The message is clear: Packaging of the future must be compatible with the cycles of a regenerative economy, which strives to phase out waste entirely.

## Meet the rising demands on the protective functions of packaging

We increase adhesive strength despite sharply reduced glue consumption

Today, all participants along the supply chain impose strict demands on protective function. An intact shipping box is a sign of quality, because consumers assume that if the outside is damaged, so are the contents. In most cases, it takes more resources to manufacture the packaged product than the packaging. But if the packaging does not fulfil its protective function, then all these resources are wasted.

# All advantages of the Baumer hhs system at a glance

## Gluing, quality assurance and process control: innovative and uniquely integrated

Now and in future, we want to help you as our customer to take advantage of opportunities on the rapidly growing corrugated packaging market, so we have made mastering your challenges the goal of our product development activities. These are to establish a sustainable production process, automate the entire supply chain more extensively and meet the high demands of global brand-name manufacturers with regard to quality, production capacity, flexibility and reliability – despite cost pressure, unstable supply chains, and rapidly changing legal and regulatory requirements.

In view of these challenges, our solution for the corrugated industry is not simply an improvement in existing equipment; it is something entirely new: The CorrBox Solution clearly stands out from the competition in many respects and offers you exclusive added value. With this modular solution from Baumer hhs, you can configure exactly the right system to meet your needs.



## A revolution in adhesive monitoring

The new PGD 1000 sensor can monitor adhesives that contain no additives whatsoever and are suitable for use on any substrate – no matter what colour, printed or unprinted. Eliminating additives means you save even more on adhesive costs. The PGD 1000 sensor also makes it possible to follow glue tracks live on screen and implement edge detection for added quality assurance. It is in no way inferior to a camera and offers additional options for monitoring quality. It's a sensor, but like a camera!

- Eliminates the need for fluorescing additives
- Monitors glue tracks on any substrate
- No special lighting required
- Glue tracks can be followed in real time on the screen of the Xtend<sup>3</sup>
- Edge detection for avoiding inside gluing

# Flexibility in procuring adhesives

In view of current problems in adhesive procurement, one important goal of product development was to support the widest possible selection of usable adhesives. This has now been achieved with the CorrBox Solution in combination with the newly designed multi-application head (based on PX 1000 technology). Eliminating the need for fluorescing additives also considerably expands the range of potential adhesives.

- Newly designed electromagnetic power unit increases tolerance to viscosity fluctuations
- Closing force of the PX 1000 has been increased by 42 percent
- PX 1000 operates reliably even at the limits of the viscosity range
- Power unit has a service life of at least one billion operating cycles
- Reduced heating of the coil maximises availability



# Precision application, excellent restart

In the gluing process, the goal is to apply the glue as precisely as possible in terms of both positioning and the quantity applied. This can be achieved only if the application head is kept free of any contamination, especially where the adhesive is applied and at the nozzle opening. This kind of particulate contamination is influenced by the viscosity of the adhesive and the dynamic motion of the mechanical parts when the nozzle opens and closes.

The PX 1000 module on the multi-application head opens and closes considerably faster than all other comparable heads with electromagnetic drive, and it displays excellent start-up behaviour. This minimises contamination in and around the opening. With the head's high closing force, even adhesives that have thickened after

long idle periods can be reliably dispensed. The nozzles on the multi-application head can be lowered into the tried-and-tested optional water bath that effectively prevents them from drying out, even over extended periods.

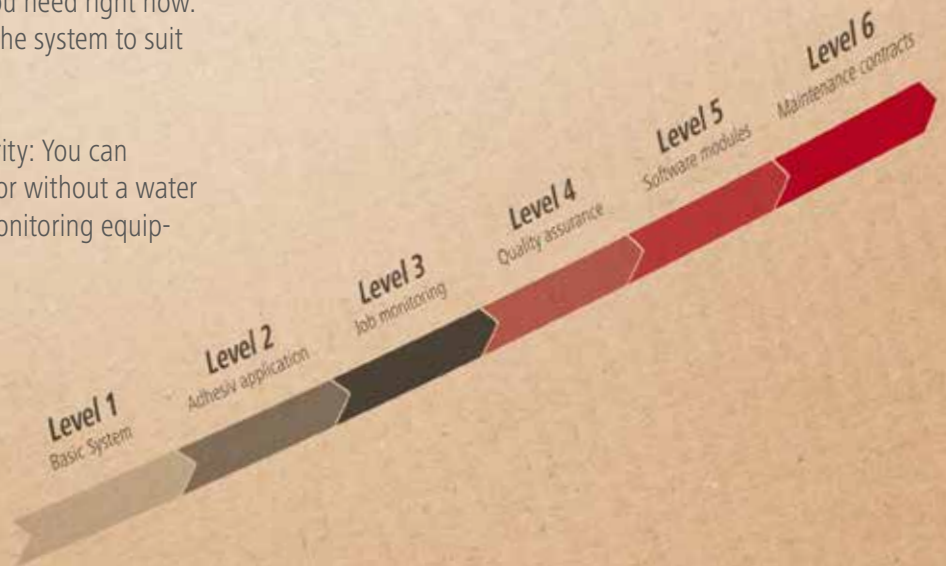
The duration of uninterrupted production between two cleaning cycles increases by 100 percent as a result, since the time required for cleaning is cut in half. The risk of gluing errors also is reduced to the same extent. Gluing errors often are caused by contamination or residue that builds up on the nozzles and deflects the emerging glue, causing it to be applied on unwanted positions on the substrate.

# Modular design for flexible investment

The CorrBox Solution is a future-proof system that allows for subsequent innovation. It is based on the Xtend3 – optimised for this application – and is best-in-class when it comes to an open architecture for long-term upgradability.

As a customer, you pay only for functions you need right now. If your business changes, you can upgrade the system to suit your needs.

The entire system was designed for modularity: You can choose from different product models with or without a water bath, and from various control functions, monitoring equipment and modular software functions.



## Xtend<sup>3</sup> – Simplify your system for growth

The system is controlled by the proven Xtend3 controller with an easy-to-use touchscreen interface, which has been specially adapted to the requirements of the corrugated industry. Separate operating levels and a reduced number of parameter inputs are just two features that greatly simplify operation. Operators only have to learn a few commands in order to work independently of technical supervisors.

In the Xtend3 software, parameter settings can be entered on different levels, and numerous parameters can be saved or pre-defined. Existing data from the machine controller or flexo folder gluer need not be entered twice. Our system is ready for the

transfer of machine data for configuring parameters. That reduces setup time and avoids doing things twice.

- For each production job, settings made by an experienced supervisor can be distinctly separated from other required parameters
- Setting parameters based on user authorisation profiles ensures a consistent level of quality
- Only personnel with the corresponding level of authorisation can change standard parameters they have defined

# Dramatically reduce adhesive costs with no trade-offs

The explosion in prices has led to tremendous cost pressure in the industry. The PX 1000 application head can slash glue consumption by up to 60 percent while maintaining the same adhesive strength. It does this by dividing the continuous line of glue that would otherwise be applied into a series of short segments or “stitches”. They are clean and precise at both ends, without any disruptive tailing whatsoever, thanks to the high switching speed. The high maximum operating frequency of the PX 1000 multi-application head makes it possible to reduce glue consumption across all speed ranges without negatively impacting the service life of the module’s power unit.

Less is more: Adhesive strength actually increases with the number of segments by up to 35 percent, as studies show. Using the optional Glue Save function, the desired reduction in glue consumption can easily be adapted to the requirements of a job right in the Xtend3 software interface. The quantities of adhesive saved not only reduce your adhesive costs; they also are a gain in sustainability: The CO2 equivalent is reduced to the same extent as the adhesive. Adhesive that is not consumed has no impact on the environment and is good for the climate. In addition, the marginal quantity of adhesive used is beneficial for recycling and the circular economy.

## Glue consumption – stitching:

3.000.000 packs/month, 1 shift,  
flap 200mm, 3 stitching lines

**1.944 kg/month**



## Glue consumption – lines:

3.000.000 packs/month, 1 shift,  
flap 200mm 3 lines

**3.600 kg/month**



## Longevity and sustainability for a secure investment

The materials and components used to fabricate the application module, pump and product guide are of premium quality, which translates into outstanding cost-efficiency, longevity and reliability, even under the challenging conditions prevailing in the corrugated industry. By combining these components with the modular, expandable CorrBox Solution, you can configure your system to master any and all future requirements. You can adapt the system as a whole to future challenges by implementing various possible upgrades.

- V4A – premium industrial quality steel for constructing the pump, offers total protection against corrosion under typical conditions in glue feed systems
- Sensor cables and plugs with high-quality screw connections
- PGD 1000 sensor with a very high protection class prevents moisture ingress and damage to the sensor in the event of malfunction

# Baumer hhs – Your competent partner

Baumer hhs, based in Krefeld, Germany, is your worldwide partner for reliable and innovative glue application and quality assurance systems.

For us, quality and precision are basic principles of engineering and manufacturing, and professional services are an integral part of our products. We maintain a constructive and collaborative dialogue with our customers and suppliers, which forms the basis for solutions that optimally meet their individual needs.

Our trained sales staff and technicians support you with any issues you encounter in production. The Baumer hhs solution centre in Krefeld offers you assistance with new applications and in selecting the right adhesives.

We want our customers to be excited – with our premium products and our impeccable all-round service. But it's best to see our products for yourself! Just call or send us an e-mail.

We'd be happy to help you with your next project!

