



Becker Gruppe



Cardboard packaging in batch size 1

Packaging processes as individual as your product



Becker Verpackungstechnik

Customized mechanical engineering solutions



The **Becker Group** was founded in 1991 and is headquartered in **Langenberg**, North Rhine-Westphalia. Today, the company consists of **Becker Sonder-Maschinenbau** and **Becker Verpackungstechnologie**. We provide complete solutions from a single source, ranging from a single machine to a complete solution, from conception to commissioning, from a sawing solution to a packaging machine. On 9,000 m² of office and hall space, around 120 employees develop innovative solutions for various industries with a great deal of creativity and **technical know-how**. We are your partner for design and project management, production, assembly, electrical wiring, programming, commissioning and our extensive after-sales service.

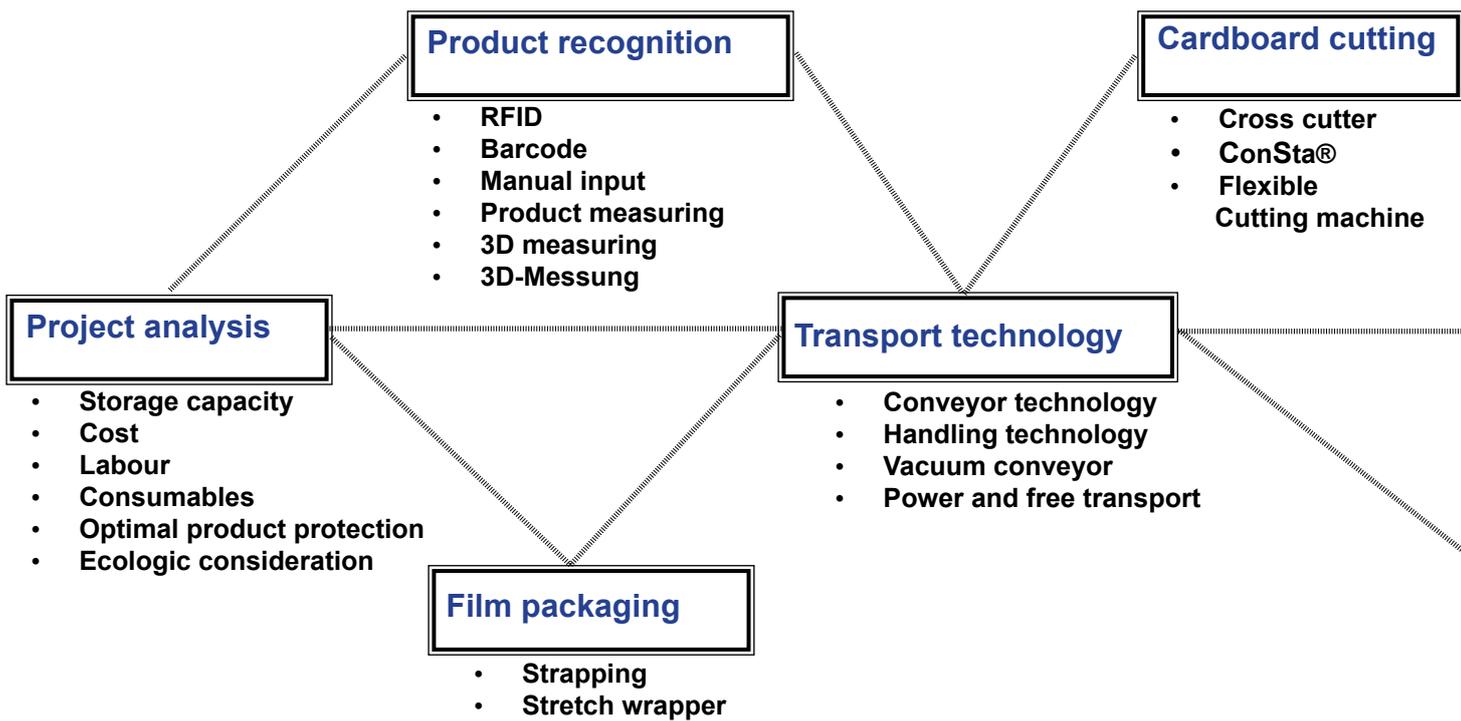


The growing demand for increasing product variety in **batch size 1** as well as continually increasing demands on the degree of automation require solutions for maximum flexibility in packaging technology. **Individually** tailored packaging processes based on flexibly cut and creased cardboard boxes, help you to minimise a complex cardboard management and all associated costs. We work with you to develop the optimum packaging for your product in our specially designed **Competence Centre Packaging**. While good product protection and the consideration of low procurement costs are imperative, the ecological consideration of the packaging and the use of only one packaging material is also important to us.



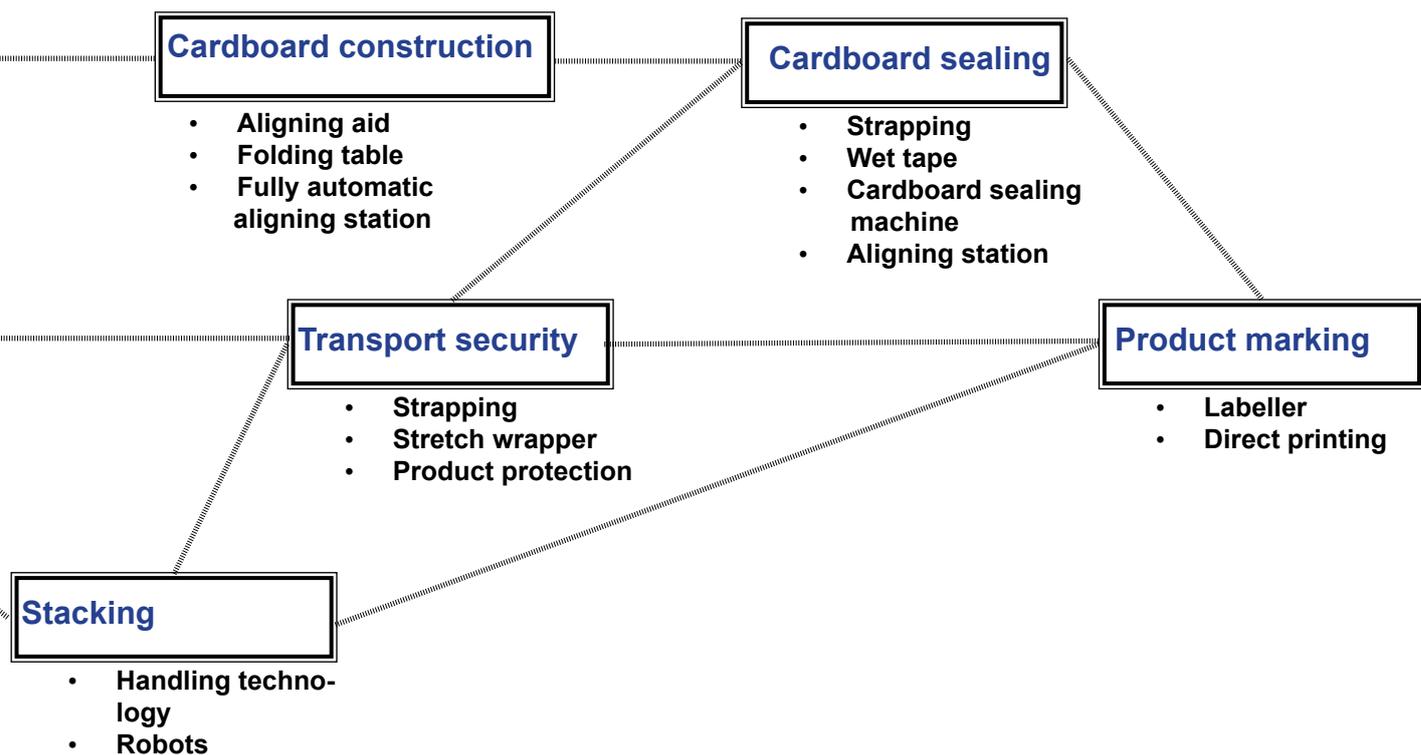
Intelligent packaging processes 4.0

Packaging technology re-imagined





Thanks to years of experience in the packaging sector and the continuously expanding product range, the **Becker Group** offers the right solution for your **specific application**, whether in packaging furniture parts, doors and frames, for the sun protection industry, for printing and textile industry or many other industries. Our focus is not on the sale of **individual packaging machines**. In a holistic approach, together, we look at, analyse and optimise the packaging processes around your product. We use tried and tested machine components for the individual processes, such as cardboard cutting, cardboard construction and sealing. Each machine component is individually adapted to your specific application and the combination of individual steps creates your own **packaging process**. Our consideration of the packaging processes reaches far beyond the field of cardboard packaging. For example, we also deal with transport security, strapping machines, stretch wrappers and automatic edge protection. We are just starting there where others already stop.



Variable length packaging

One system - many possibilities

Due to the increasing demand for (partly) **automatic packaging systems** in the sun protection, textile and electrical industries, the Becker Group has developed a series especially for packaging variable length products. Depending on the requirements, the cardboard can be cut to size using continuous cardboard or sheets using a cross cutter or the **ConSta®** die-cutter. While the cardboard can be grooved or cut longitudinally or transversely with the cross cutter, there is virtually no limit to the creativity in cardboard production using a **ConSta®**. Due to the punching principle, radii, slanted or triangular cardboard boxes are no longer a challenge. A part of the series also includes various solutions for erecting and closing the cardboard boxes, starting with a simple erecting aid with a strapping machine up to the motorised folding table with automatic hot gluing. We often add customised solutions, e.g. for workpiece transport, labelling or weighing the products.



Benefits for you

- Flexible production of variable length cuts
- Individual, product-specific cardboard box design
- Complex closure geometries due to cardboard punching
- Processing of all common corrugated cardboard qualities possible
- Expandable at any time due to its modular structure
- Easy machine control through intuitive operating concept

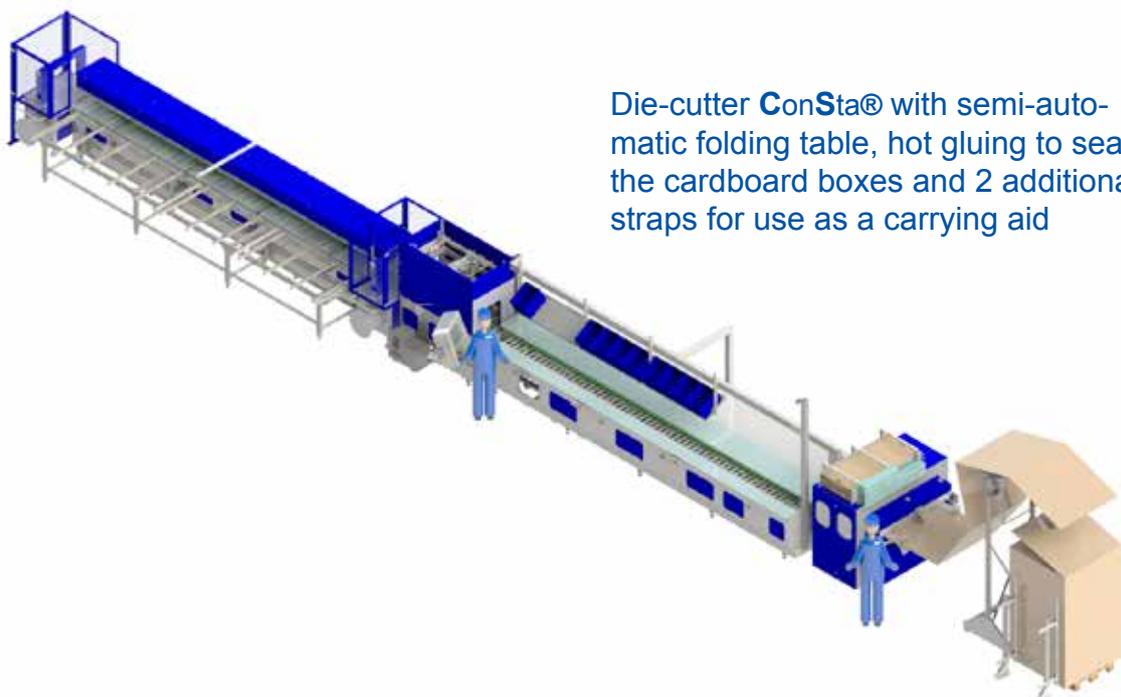
Project examples

Example of a packaging solution for variable length products



Die-cutter **ConSta®** with easy raising aid and strapping for sealing the cardboard boxes

Example of variable length packaging for products up to 7,000 mm



Die-cutter **ConSta®** with semi-automatic folding table, hot gluing to seal the cardboard boxes and 2 additional straps for use as a carrying aid

Cardboard packaging in Fefco 410

The packaging solution for many industries

With cardboard packaging in **Fefco 410**, the Becker Group has created a flexible solution for fully automatic packaging products that vary in their size within **batch size 1**. Up to 3 parts per minute can be packed with a single line. Due to the modular design, the packaging system can of course be gradually extended or individual machine parts exchanged through manual intervention. Following product recognition using a scanner, the **endless cardboard** flexible cut is made using the cardboard quality that is suitable for the product. Our experience in the transport of cardboard blanks, e.g. under the hall ceiling or from one hall level to another, make it possible to place the **cutting machine** in accordance with customer requirements. After the combination of the cardboard box and the product, it is erected fully automatically in batch size 1 and sealed. Finally, the packaged product is labelled by a labeller or through direct printing on the finished cardboard box before it is then automatically stacked.

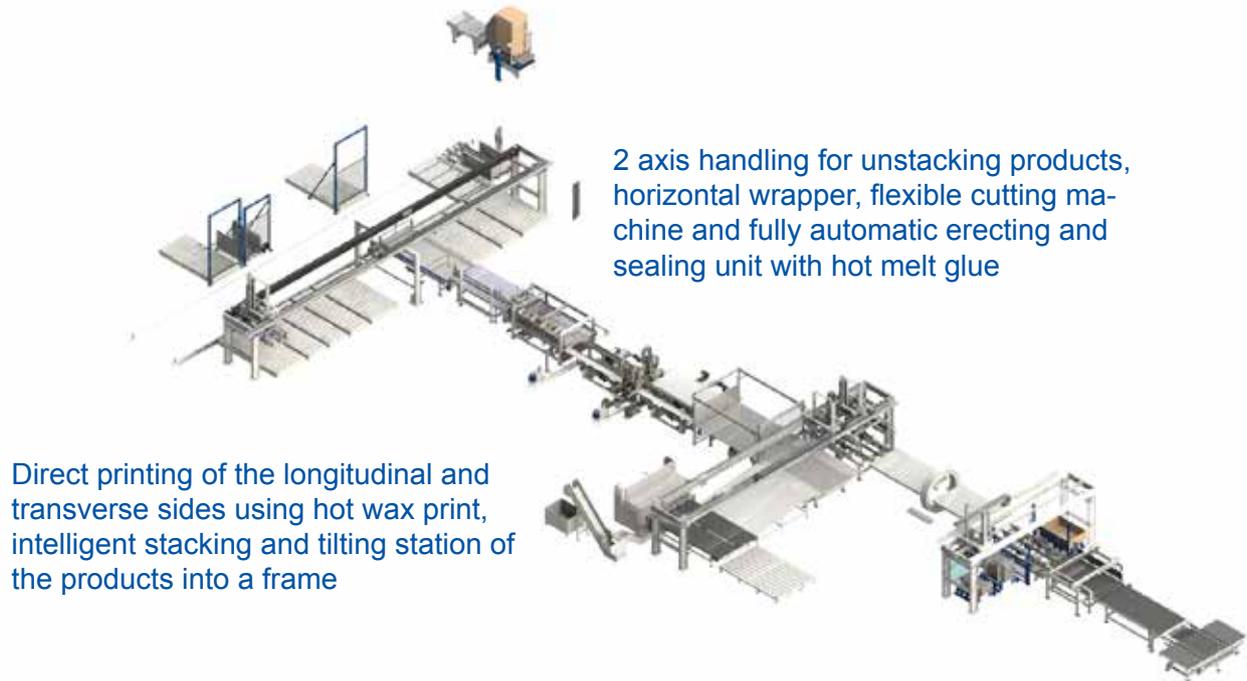


Benefits for you

- Highly flexible cardboard box cut in batch size 1
- Automatic product recognition
- Various interface solutions for customer systems
- Low error rate due to fully automatic process
- Packing up to 3 parts per minute on one line
- Increase of the cycle rate through further system parts possible
- Due to its high flexibility, it can be used in almost all sectors with (almost) rectangular parts

Project examples

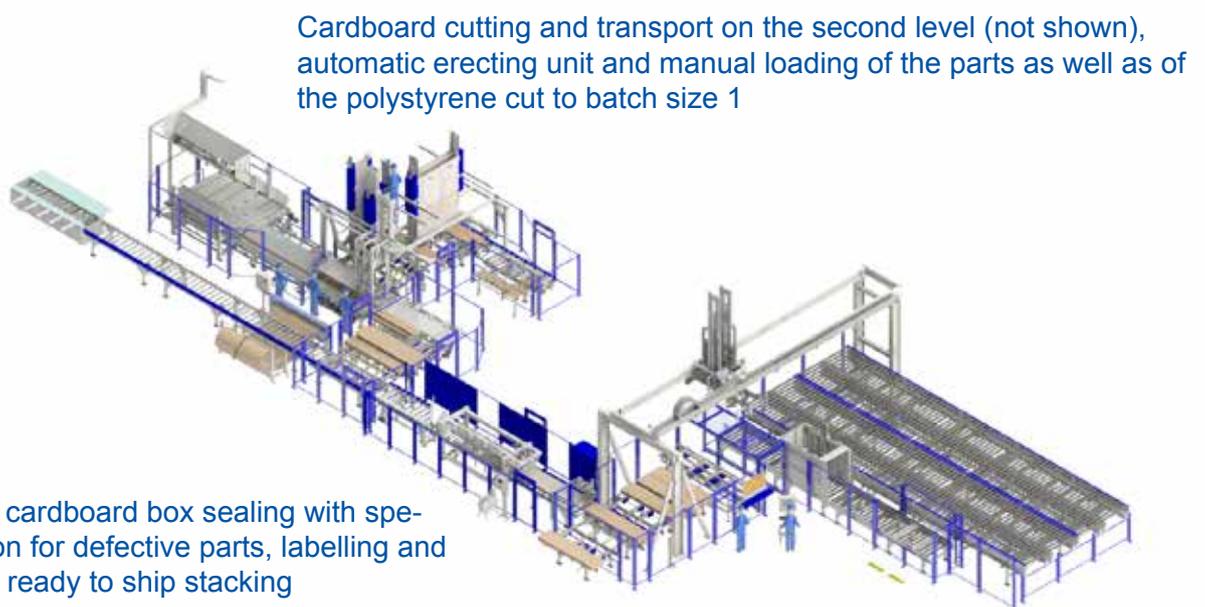
Example of fully automatic cardboard box packaging in batch size 1



2 axis handling for unstacking products, horizontal wrapper, flexible cutting machine and fully automatic erecting and sealing unit with hot melt glue

Direct printing of the longitudinal and transverse sides using hot wax print, intelligent stacking and tilting station of the products into a frame

Example of cardboard packaging with manual loading of the parts



Cardboard cutting and transport on the second level (not shown), automatic erecting unit and manual loading of the parts as well as of the polystyrene cut to batch size 1

Automatic cardboard box sealing with special function for defective parts, labelling and intelligent, ready to ship stacking

Edge protection made of cardboard

Highest performance with batch size 1

When it comes to protecting the sides or corners of products, Becker edge protection systems are used. Whether for furniture or kitchen parts and fronts, for worktops, doors or in other areas, together we will develop the **perfect protection** for your product. By using wood, soft fibre and honeycomb panels in combination with cardboard packaging cut to **batch size 1**, we do not only focus on cost-effectiveness but also the production and later disposal of the packaging and therefore the environment. Cycle rates of up to 6 parts per minute can be achieved due to the usually very simple cut with grooves on only one plane and through the use of a cross cutter. Depending on the application, the protection is first moulded and then applied, or moulded directly around the product in the cycle. A **specially developed adhesive** allows the direct application of protection to both the product and to a previously shrink wrapped product. The edge protection can be removed without damaging the film or the surface of the product.



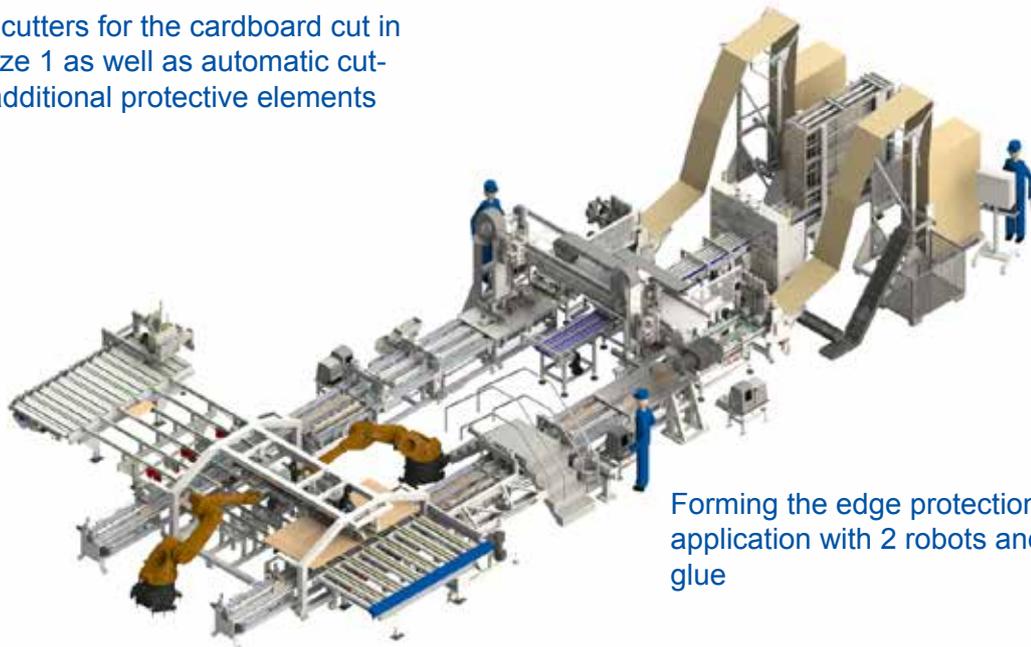
Benefits for you

- High cycle performance of up to 6 parts per minute through application of the protection in the cycle
- Additional increase of the cycle rate through further system parts
- Specially designed solutions for better protection of edges and corners
- High economic efficiency through selective product protection
- Use of a special adhesive for easy removal of the protection from the product or film
- Various interface solutions for customer systems
- Possible packaging solution even for very flat parts

Project examples

Example of edge protection packaging for flat

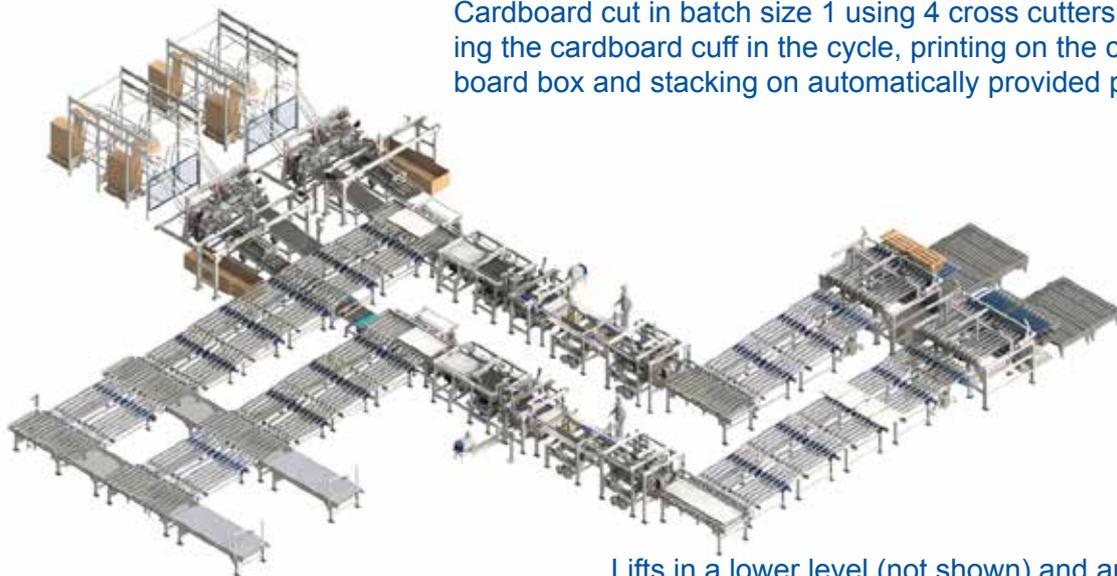
2 cross cutters for the cardboard cut in batch size 1 as well as automatic cutting of additional protective elements



Forming the edge protection and application with 2 robots and special glue

Example of edge protection packaging for shrink wrapped parts

Cardboard cut in batch size 1 using 4 cross cutters, applying the cardboard cuff in the cycle, printing on the cardboard box and stacking on automatically provided pallets



Lifts in a lower level (not shown) and automatic strapping for transport security

Flat parts packaging

The innovation in batch size 1 packaging

While in the past, very flat products were only packaged in solid board with pre-cut blanks due to the complexity and often very high demands on the cycle rate, **Becker flat part packaging** now offers an innovative solution. Depending on the desired performance, the cardboard boxes are cut flexibly with 1 or 2 cutting machines. The products can now be placed on the cardboard manually or fully automatically. The newly developed erecting unit forms the heart of the packaging systems and even enables the packaging of **disassembled furniture in batch size 1**. After the erecting process, the cardboard boxes are sealed automatically. Of course, like all other **Becker packaging** systems, the flat part packaging can be easily combined with other components such as cardboard box stacking, labelling or automatic product recognition. In the furniture and kitchen industry packaging often takes place following highly flexible Becker saws.



Benefits for you

- Unique solution for packaging flat parts in solid cardboard
- Can be used for batch size 1 production as well as for small batches
- Very high cycle performance possible due to the parallel use of several cutting machines
- All common corrugated cardboard types possible
- Can be combined with other products of the Becker packaging family
- Reduced storage costs by cutting from continuous cardboard
- Cost reduction in cardboard box management



Competence Centre Packaging

We listen, understand and solve



The **Competence Centre Packaging** is a result of our philosophy of providing complete solutions from a single source. Our aim is to holistically advise our customers on packaging issues. Together with you, we begin by developing the perfect packaging for your product. For this purpose, state-of-the-art machines for the flexible cardboard cutting are available in our newly opened 700 m² centre for innovative packaging processes. The first creative workshops are usually followed by the production of sample cardboard boxes and independent drop tests or shipping tests with the packaged products.

While others stop consulting at the cutting machine, we then really start our creative process. Our goal is not to sell single machines, but to develop holistic solutions. Together, we will think about filling, erecting or sealing the cardboard boxes.

However, our packaging expertise does not end with cardboard packaging. We are also your partner for strapping technology, stretch winder or product protection in transport security and many more. In addition, we would be happy to assist you in finding the consumables for your packaging system or we can offer them directly.

Individual operating concepts

We set standards in the packaging sector



The constantly growing demands on the degree of automation, the networking of many different plant components and the individualisation of production steps, summarised under the term Industry 4.0, require a corresponding visualisation. In addition to a simple and clear operation, this visualisation gives the plant operator the opportunity to retrieve information or to influence functionalities at any time. Our customers appreciate our long-standing optimised standards in the Becker operating concept as well as the opportunity to contribute their own individual wishes.

Spanning from electrical control panel design and machine wiring up to software engineering, with the Becker Group you also get everything from a single source in the electrical sector. With our wide-ranging software department and knowledge in both PLC and NC-based control with Siemens or Beckhoff, the customers decide what they get.



Becker Service

We make sure that your machine is running

Our professional service is defined by easy accessibility, quick availability of personnel and spare parts, competent emergency assistance as well as efficient remote maintenance of complex machines and systems. High quality maintenance and inspections by our well-trained service technicians as well as uncomplicated support for machine extensions and machine relocations are regarded as a matter of course.

Benefit from our extensive range of services. We are always there for you: We offer the supply of spare parts, service at your site, our telephone hotline, and an online service. We are happy to create an individual service concept for you.





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