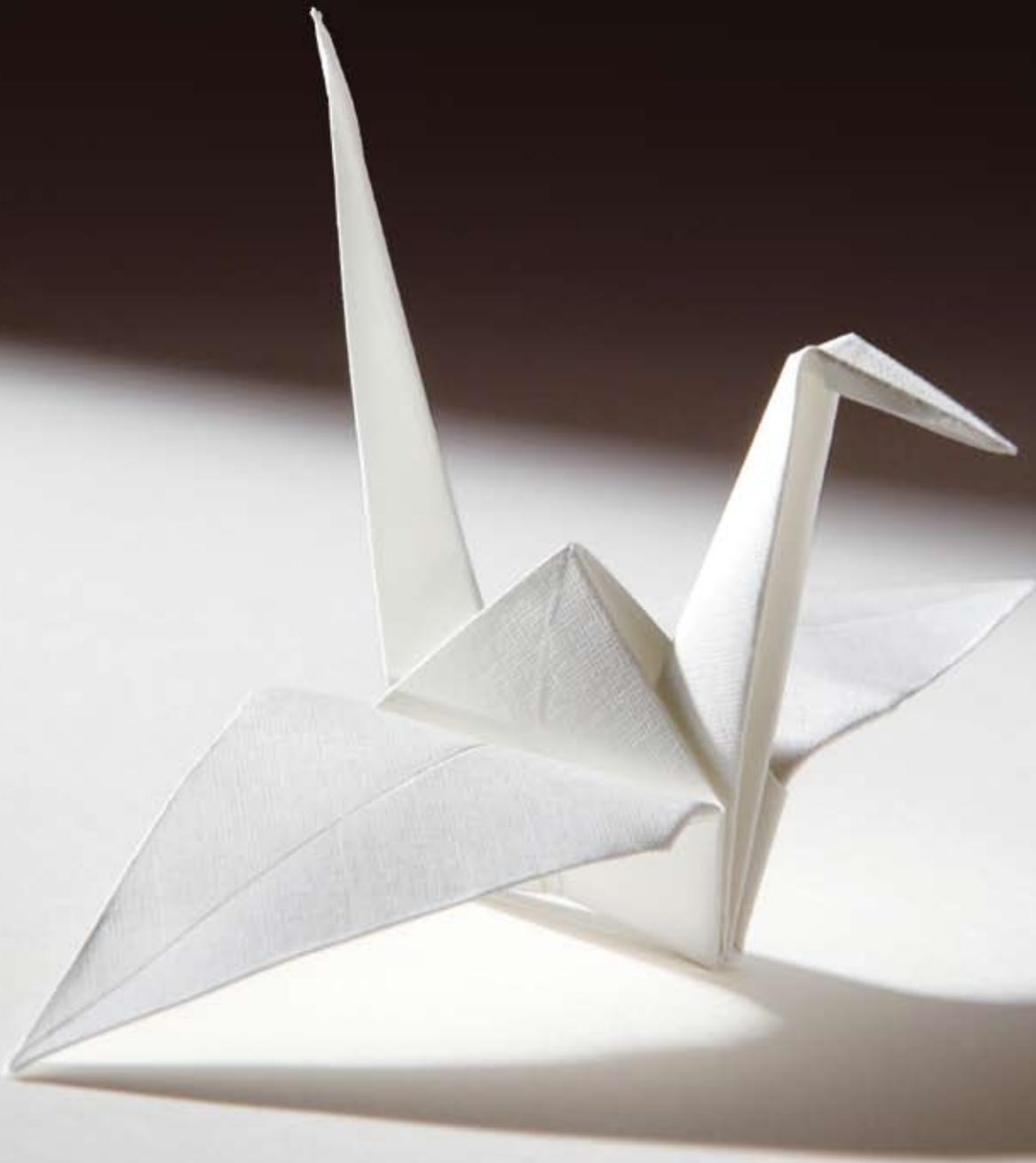


Innovative packaging technology
Adding value to your success



Over 50 years of growth thanks to your individual requirements



Innovative and economical packaging solutions have a long tradition at dy-pack. This is what Gert Dyckerhoff and his son Wilhelm stand for.

dy-pack has always required one thing from its products: that they are the best. And because we know what's important to you, we develop our packaging solutions according to your exact needs. We provide you with more than just a high-quality bag – we provide you with a concept which takes into account all the parameters necessary for economical bagging of bulk materials.

The outcome of this requirement says everything: Not only is dy-pack one of the leading independent manufacturers of paper bags, but continuously rising output figures and increasing export quotas reflect our success. Our outstanding reputation as a "Think Tank" of the industry, numerous patents and petty patents as well as the added value our customers gain with every dy-pack product are all factors we can be proud of.

This is what our business is based on. After all, some things haven't changed in the past 50 years: your exacting demands for an economical, reliable and safe packaging of your bulk materials.



More than 200 million paper bags are produced each year at the Wenden-Gerlingen plant. It is in this head office of the globally acting dy-pack group that the future of packaging technology is formed.



Technology leader for paper bags:
We invest constantly in your competitive edge

Since the very beginning, we have concentrated our efforts on what we know best: developing and manufacturing paper bags for the cement, mortar and construction material industries, for chemicals and the chemistry of building materials as well as for the food industry. You will find dy-pack products wherever rapid, clean and safe filling is valued – worldwide!

In order to ensure our technological lead in the future, we invest today in our production plants, our research department and most of all we invest in our employees. We believe tomorrow's ideas are developed by today's experts – and we guarantee you will find them at dy-pack!

dy-pack paper bags (from 2 to 160 liters) have always been customized according to your requirements. After all, you don't want to buy a ready-made product but one whose overall concept might lead you to a competitive edge.



We are no trendsetters by accident: our research and development department's daily work consists of optimizing bags according to your requirements.





Innovation is not an issue.
It's our day-to-day business



Samples of the new designs are hand-made in our prototyping department. They are then tested on the original machines and further optimized, if necessary, before the bags go into full-scale production.

Our extensive knowledge of the packaging industry has been acquired over the past decades and is the basis of our technological lead. This expertise we gladly share with you. Take advantage of our advisory skills for your success!

Profitability is the decisive factor in developing innovative packaging concepts – whatever the industry. This is why the first step in dy-pack's service concept is to always analyze your individual situation.

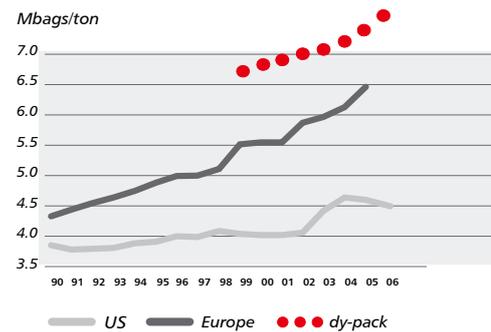
By analyzing the complete process chain and logistics of your enterprise – from the filling equipment to your customers – we can provide you with specifications best-suited for your bag design.

Secure added value
with dy-pack's services concept

With dy-pack, you get more than bags: you get a packaging concept and bag designs to best meet your requirements. Moreover, you will benefit from innovations our experts have developed over the years for the industry. More expertise from our side means added value for you.

Intelligent ideas such as reducing the amount of paper used, new technologies for a faster filling of the bags as well as the highest process stability will greatly increase your productivity without causing any additional investment in your filling system.

Furthermore, we will provide you with standardization options in order to lower the number of bag sizes and types, creating a considerable reduction in complexity and costs related to the filling.



Compared to European and American manufacturers of bags, dy-pack's performance is world-class not only in regards to the amount of paper required. It's simple: more expertise – lower costs.



Thanks to close contact with our customers and the manufacturers of filling equipment, you always get the best advice with dy-pack. Our specialists will develop with you on site the best options to reach a sustainable increase in efficiency.



**When it comes to quality,
there are no half-measures**



*High printing quality at production
speed of up to 400m/min*

At dy-pack, there are no compromises on quality. From the selection of raw material, the permanent control of paper, color and glue, to the exclusive use of high quality machines – when it comes to your satisfaction, only the very best is good enough.

It goes without saying that dy-pack uses only high-grade paper. We have up to 3,000 tons of paper in stock which allows us to always provide constant high quality products and consequent delivery dates. A large amount of quality paper is also in consignment stock at our suppliers' premises and available on short notice.

dy-pack also ensures high-end quality for the bag printing. Our modern high-performance printing machines can apply up to 8 colors and a surface coating. Your designers' creativity is thereby not limited and your products get a first-class appearance.



Competent – solid – reliable:
Market edge included

The complete dy-pack production concept is designed to ensure a smooth and high quality processing of your orders. Above all, an excellent overall performance which guarantees your success in the market is the basis of all our activities.

Not only should the innovations from our research and development departments become top quality products, they should also assure you of all possible financial and performance-related advantages. To do so, we come up with a lot of good ideas.

Our five state of the art production lines, operating on 4 shifts, can produce over 700,000 bags per day. Bags you currently do not require immediately can be stored temporarily in our 13,500-pallet high-bay warehouse and retrieved just-in-time when needed. You then benefit from cost-effective full batch production and highest flexibility.



Your orders are processed rapidly and reliably thanks to our modern servo-driven printing machines. Due to the sleeve technology, very short set-up times are achieved.





The dy-pack principle for the cement industry:
Each individual bag counts, even at mass production



*Constant high quality is dy-pack's standard,
even at high volume production*

Today's modern filling systems for the cement industry can fill over 4,000 bags per hour. Process stability plays a decisive role here as a simple error can stop production and have a negative impact on your productivity.

For this reason it is most important to consider quality and not just competitive prices when selecting a "simple" bag. Not only can dy-pack cement bags be filled rapidly, they are also extremely resilient and because they are customized according to your requirements, you can fully rely on dy-pack experts when it comes to process stability.

What counts for your customers: clean, perfectly filled bags stacked on pallets leave a great impression. What counts for you: cost-effective mass production due to reduced paper use in a high quality process.

**Make use of our innovations
for your competitive advantage**

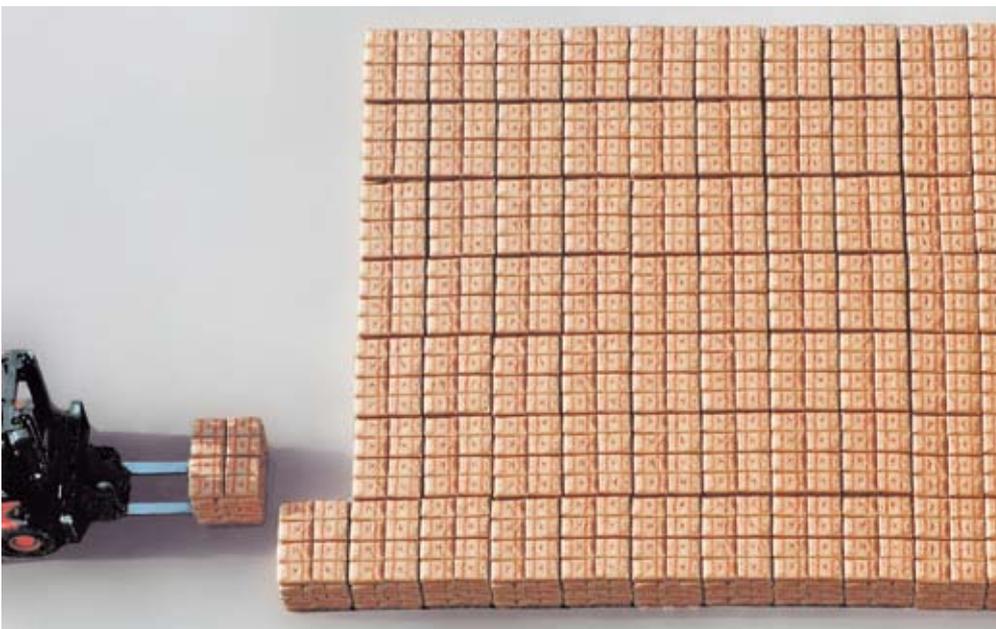
Increased productivity thanks to faster filling, more cleanliness and safety due to maximum paper strength. With dy-pack's innovative ideas, you hold all the right cards.

In order to rapidly de-aerate the bag while filling it – thus increasing the filling speed – dy-pack experts have developed a patented system called the Nano[®]-Perforation.

Unlike traditional solutions, the clever concept of the Nano[®]-Perforation allows a reduction in paper grammage and in the number of plies required. You will still benefit from a high strength paper while saving on the costs.



To protect your product against humidity, perforations are applied only on defined areas of the bag therefore reducing the risk of humidity penetrating.



The Nano[®]-Perforation technology allows up to twice as much aeration during filling. The hole patterns are patent protected.

**With dy-pack your products are sure
to make a great impression**



Clean print quality – great looks!

In a consumer business world, the performance of a product is only half the rent. dy-pack offers you a variety of excellent customized printing options for your bags.

And that's not all: dy-pack also offers maximum cleanliness of the bags until they are in the final consumer's trunk. Problems such as dusty bags or ones that break open are now history with dy-pack's high strength bags. Don't settle for less – after all, these are factors that determine your product's success on the market.



With dy-pack, your products have earned themselves
the best-suited packaging, and you earn more!

Industries in which a large variety of products is everyday business are precisely the ones in which dy-pack – thanks to its expertise – scores best. We don't only consider the one single bag before we actually start the job but your overall range of products.

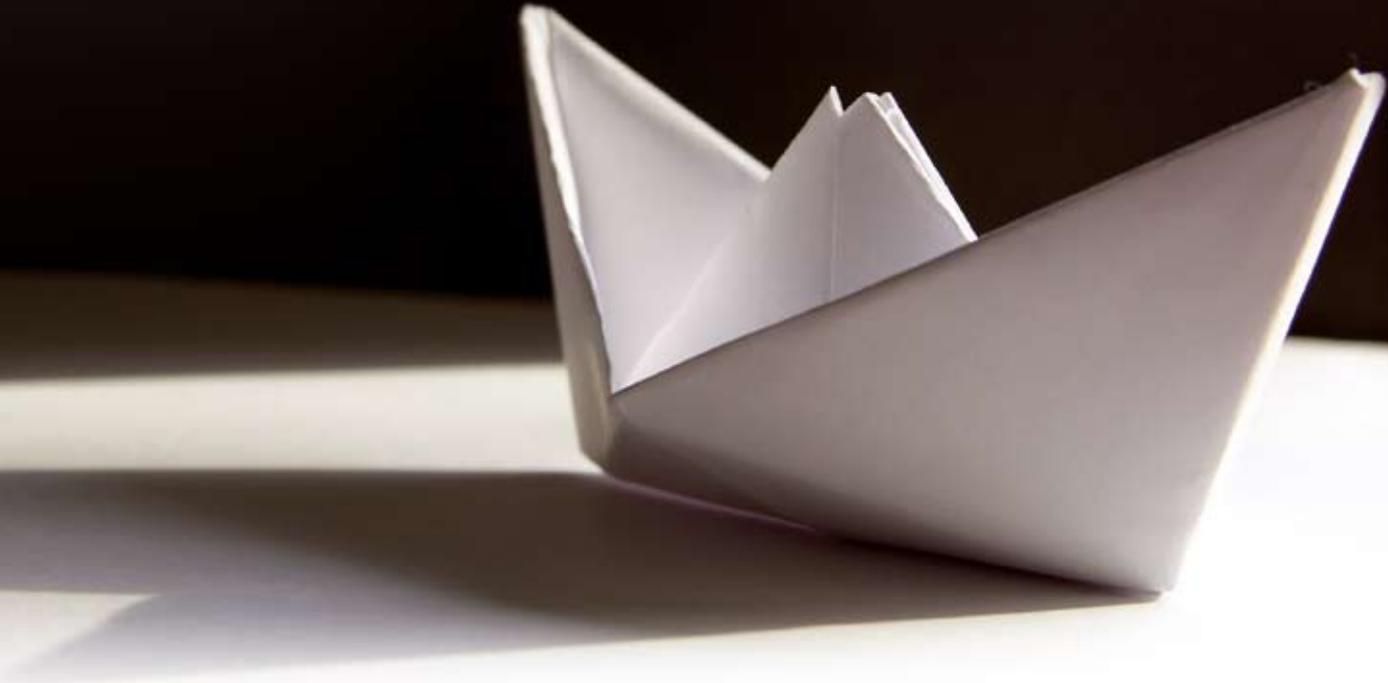
Our specialists have managed on several occasions at leading manufacturers of building material to greatly reduce, through standardization, the costs related to packaging.

How? It's actually quite simple: At several locations different bag sizes, for example, were used for the same product. As part of a cost-saving program in close collaboration with the customer, expenses related to packaging could be reduced by 25 percent and more.

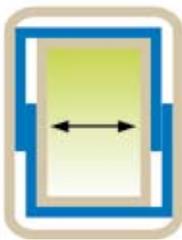


*Lower costs – increased earnings,
without renouncing to the renowned
dy-pack quality.*





**When no intrusion of humidity should occur –
dy-pack technology for the chemistry of building materials**



*The barrier film is not perforated.
During filling air leaks at the overlap area.
After the filling the double overlap
barrier film layer provides a reliable
protection against humidity.*

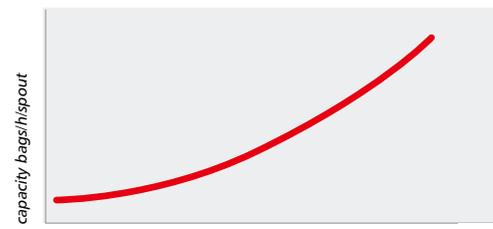
In this industry, product protection plays a major role. However, these requirements should not encumber other important parameters such as speed of filling, optimum printing quality and easy handling by the final customer. This is a challenge our competent experts are glad to solve.

*When such high requirements are set, we play all our innovation cards.
This way, we can provide added value to top quality brands for which the final consumer as well as the manufacturer expect the highest packaging quality.
In short: more comfort, more effectiveness, more cleanliness and more success for you!*

**The dy-pack added value principle:
Thrilled consumers – successful producers**

Why choose second-class when first-class solutions are at hand? And this, in every aspect! With the dy-pack DF principle, for example, you can kill two birds with one stone: The double overlap film layer ensures fast filling times while simultaneously providing an optimum humidity protection.

At the same time, you can assure your customers of longer product storage time, provide more comfort with the dy-pack carry handle and leave a lasting impression with the excellent printing quality.



deaeration capability m³/h

Typical dy-pack technology: The output of high performance filling plants can be sustainably increased.

Convenient, clean, perfect: Innovative packaging technology provides added value for consumers and manufacturers.



**We easily solve even your
hardest packaging tasks**



Packaging for the chemical industry is particularly demanding: Some products can be hard to fill, as they are extremely light and damageable. However, requirements such as speed and process stability also have to be met. This is exactly when dy-pack uses its knowledge to fulfill these demanding tasks.

For the industrial packaging of high-quality bulk materials, individual counseling and problem solving is essential. Again you benefit from our experience and mission to develop the perfect individual solution for you.

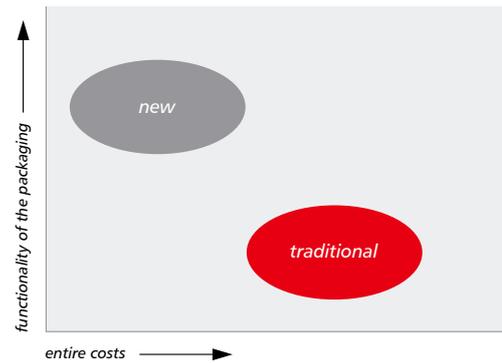


**Economical, customized, reliable:
Everything perfectly packed!**

It's that easy: Based on a thorough process analysis, dy-pack specialists develop customized bags according to your exact requirements – highest process stability included! No wonder dy-pack is the world's most demanded partner for challenging products.

A special process appraisal method is then used in your enterprise. The results are clear to see: Along with the reduction in idle times and scrap, the filling time can also often be drastically reduced – sometimes by as much as 75 percent!

But there's more: The process costs related to paper use can also be reduced thanks to our clever ideas. By switching the 5-layer paper to a 2-layer paper with barrier film in a big chemical company, the amount of paper used and the weight were reduced by 50 percent – without having to change the filling technology.



Less is often more: When you consider the entire costs and functionality of a traditional, multiply packaging with dy-pack's new designs, you will come to the same conclusion.



Two plies of paper plus a barrier film is in most of the cases sufficient enough to fulfill the request.



You can find 5-ply-bag-designs still. This is very often environmental and economical counterproductive.



Clean and hygienic all the way:
Food packaging from dy-pack



Metal detector

For food packaging, there are no compromises to be made in regards to hygiene, impermeability and protection against humidity. Good to know you can rely on dy-pack experts here as well – because we've solved such problems a hundred times already. This makes it then much easier for you!

Take advantage of dy-pack's modular system of innovations and forget about cleanliness-related problems. It goes without saying that filling of food should be effected dust-free and without wear debris, e.g. metal. You can rely on dy-pack specialists to eliminate bacteria infestation risk, mold and humidity problems in future.

**From production to the final customer:
All hygiene regulations under control**

The use of starch for paper glue is an ideal culture medium for bacteria – a situation which can prove fatal for packaging, mostly that of food. Heat and humidity often occurring during transport can also contribute to aggravate the problem.

But problems are there to be solved – especially at dy-pack. From the use of a special glue to production under HACCP regulations, with concepts for humidity protection and excellent impermeability, we don't give mold the slightest chance. You can count on it!



Glue preparation



*A high demand that pays off:
For dy-pack, quality also means
all production units are subject to
strict cleanliness measures.*

Best equipped to meet the highest standards!



Valve bag manufacturing

To meet our high quality standards, we have aligned our whole enterprise, and of course production, with this in mind. Your order will run through the different production stages like clockwork – according to schedule and always under rigorous quality control.

This tight organization allows us to meet your requirements in regards to timely delivery, constant high quality as well as short reaction times. To know you're in good hands with our experts is also part of the dy-pack added value principle.

- Raw material inventory: storage capacity for up to 3,000 tons of paper and 200 tons of film.
- High performance printing machine
- 5 valve bag manufacturing production lines
- Fully automatic high-bay warehouse
- Shipping department



**If you value market lead,
you'll value dy-pack's overall performance**

Process optimization is one of our biggest strengths, for your benefit and ours. For this reason, each stage in the process is coordinated with the others – and all of them we master with world-class technology and outstanding staff.

Our production efficiency is renowned in the industry. We supply only top quality products and provide you with the ideal conditions to support your successful product in the market with our flexibility, reliability and decades-long expertise. Our experience with many different challenges is reflected in the more than 20,000 glue belt samples we have developed over the years – this is something you can count on!



Glue belt manufacturing

Cutting edge technology is good but quality control is even better: Our production is subject to rigorous control checks in order to always guarantee the highest quality possible.



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