



NEWS

WE SHOW THE WAY TO BETTER BUSINESS

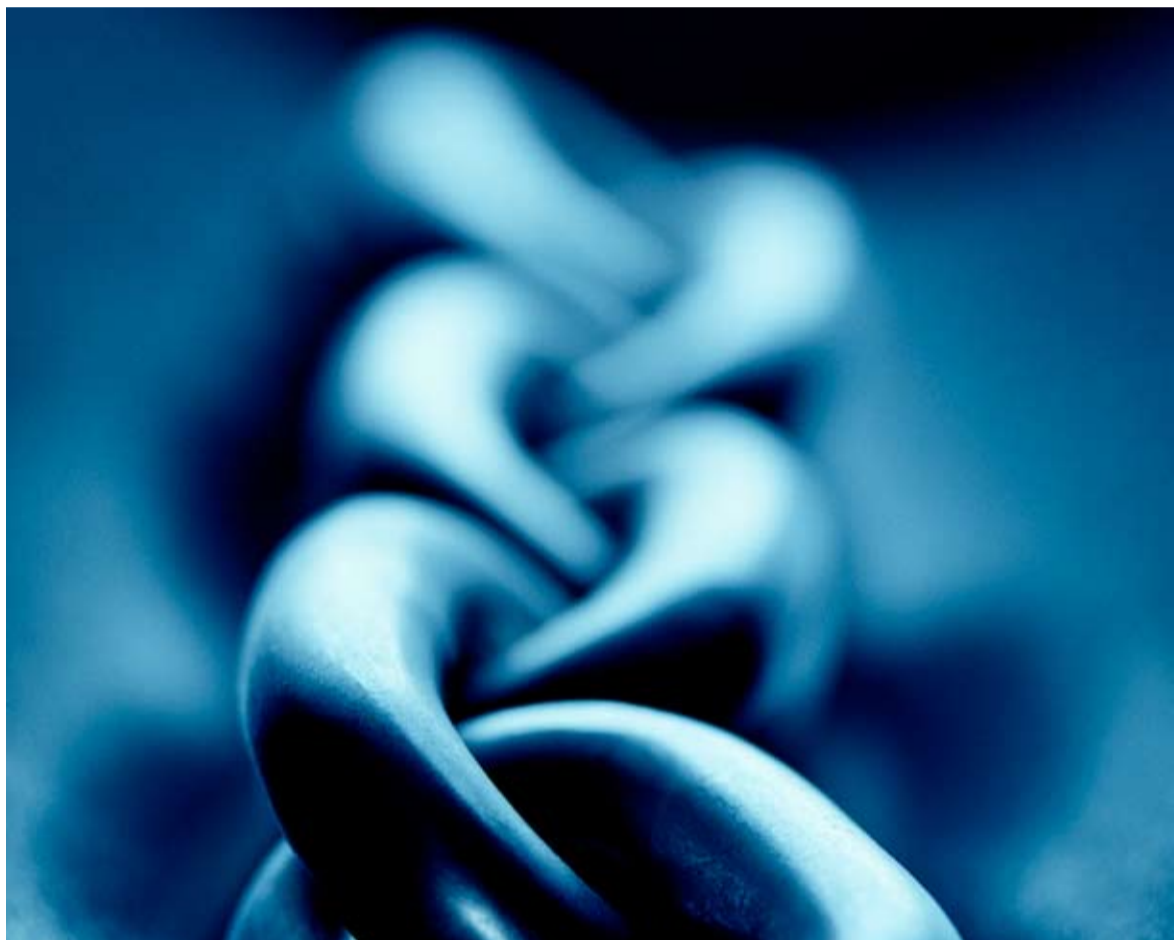
SACK SOLUTIONS

SUPPORTS THE WHOLE VALUE CHAIN



Billerud's product range and services for sacks have now been gathered under one roof – Sack Solutions.

Here, you will find the experience, the technical expertise, the service and the market-leading products.



After many decades of experience of sack paper production, everything that has to do with sack paper and sack services has now been gathered in Billerud Sack Solutions.

“We have created a concept that involves the whole value chain. Our goal is to help the players to improve on the design, conversion, filling and distribution of sacks in order to achieve better overall economy,” says Mikael Strömbäck, Sales and Marketing Director at Billerud Sack Solutions.

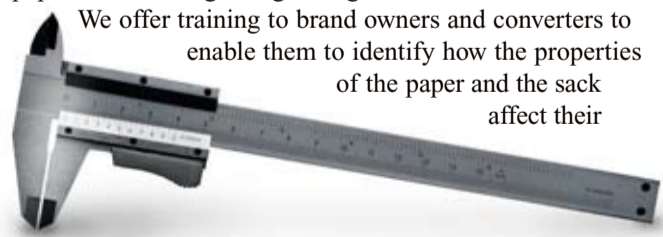
Sack Solutions focuses in particular on sack paper and sacks for products in powder form, mainly cement and other construction materials, industrial minerals and chemicals.

FOUR VALUE PROPOSITIONS

Sack Solutions consists of four major value propositions: Technical Consulting, Training and Seminars, Total Customer Value and the product family Billerud QuickFill®.

“We help our customers with everything from choice of paper to advice regarding filling and distribution of sacks.

We offer training to brand owners and converters to enable them to identify how the properties of the paper and the sack affect their



processes and profitability”, says Mikael Strömbäck, who emphasises that there are large differences between sack papers.

With the right sack, there is a big potential for greater profitability

“Sacks are not homogenous products, the strength of two different sack papers could differ by up to 300 per cent”, says Mikael and points out that everybody could benefit from reviewing their packaging solutions.

DEVELOPED TOGETHER WITH CUSTOMERS

Billerud's wide range of brown and white sack papers has been developed in close collaboration with customers all over the world. As a result, Billerud has gained considerable know-how as regards the industry and a good understanding of the market's wishes and requirements.

“In many cases, it is possible to reduce the amount of paper used while retaining strength and at the same time raising productivity. This is something that many producers of filling goods are not aware of. Our job is to help customers to discover the potential of better packaging and show them the way to greater profitability”. ■

SACK SOLUTIONS

Technical Consulting
Provides technical advice and services based on long experience and tests in Billerud Sack Laboratory.

Training & Seminars
Training of converters and brand owners in important properties of paper and sacks so that they can improve their processes and make them more efficient.

TCV – Total Customer Value
Complete mapping of the different parts of the value chain and improvements that lead to increased effectiveness and cost savings.

QuickFill®
Billerud's sack paper concept is based on a perfect combination of high strength for reduced amount of paper per sack, and high porosity for quick deaeration and high productivity when filling. QuickFill consists of a whole family of white and brown products for a range of different requirements.



LET US SHOW YOU OUR SOLUTION



NEW QuickFill® Xcel IS HERE



SACK PAPER WITH A LOW CARBON FOOTPRINT



ATLAS IS PLEASED WITH QuickFill®

INNOVATION
FOR COST
SAVINGS AND
PRODUCTIVITY

In today's tough economic climate, cutting costs in order to achieve higher profitability is typical for the industry. But it is actually quite possible to be cost effective without cutting back. Nor does making money always require large investments or organisational changes. Sometimes, all that is needed is a different way of thinking.

They say that no chain is stronger than its weakest link, and relatively small factors can have a significant impact on the whole chain. This is also true in our industry. When it comes to productivity, the packaging solution plays a far larger role than many producers of filling goods might believe. A strong sack construction, which is adapted to the product and the filling method, has a positive effect at every stage of the value chain.

To offer sack paper that meets the market's demands, Billerud conducts progressive development work. We have been innovating for more than four decades in close collaboration with our customers all over the world. Our closeness to the market means that we know and understand what our customers' wishes and requirements are, at the same time as we have gained a far-reaching insight into their processes.

We want to share our know-how and resources so that more of our customers can enjoy resource-efficient and environmentally friendly packaging solutions. We know that it is possible to save in an effective way. Let us show you the way to better business.

Welcome to Billerud and Sack Solutions.



Johan Nellbeck
Business Area Director
Packaging & Speciality Paper

BILLERUD LEADS THE WAY WITH QuickFill®



Few sack papers come even close to the productivity and cost effectiveness that can be achieved with Billerud QuickFill®. The secret is the combination of high strength and high porosity. The filling processes are extremely fast and with QuickFill you get attractive, strong and dust-free sacks. QuickFill increases profitability throughout the value chain.

Magnus Olovsson, Product and Development Manager for sack paper at Billerud, has worked with sack and kraft paper for more than 20 years.

Through the years, a lot of knowledge about sack paper and paper sack has been gathered.

In 20 years, we have succeeded in doubling both porosity and strength

"First, the raw material is very important. All Billerud's sack paper products are based on

100 per cent primary fibre from northern conifer forests. But the manufacturing process is also crucial for developing a strong paper", says Magnus Olovsson.

STRENGTH – AND POROSITY

However, strength is not the only reason why QuickFill is so unique. The paper's high porosity means that the sacks do not need to be perforated prior to filling.

"Normally, porosity and strength are not compatible, but they are in the case of QuickFill. Thanks to methodical development work, we have succeeded in extending the limits every year. In 20 years, we have succeeded in doubling both porosity and strength", says Magnus and adds:

"With less paper but still the same strength,

customers can save a lot of money".

With QuickFill, there is no dust when the sacks are filled, which increases their attractiveness and reduces the risk of leakage.

Since the whole sack is filled, its shape remains even and rectangular, thus facilitating handling, storage and transport. Converters can also benefit from QuickFill, promises Magnus Olovsson.

"QuickFill has excellent runability and printability", he says and points out that QuickFill is not just a paper product, it is a complete concept.

"QuickFill has been developed to support all the players in the value chain and thus increase their profitability". ■

New

QuickFill® Xcel is here

We are now offering our customers an even stronger sack paper – developed to satisfy the tough demands made on 50 kg sacks. Substantial material savings can be made – often 10 to 15 per cent or even more depending on sack design.

Anna-Karin Magnusson, Product Development Engineer at Billerud, has been working on developing and refining QuickFill Xcel. The new brown sack paper has finally been launched and is now out on the market.

"QuickFill Xcel has been developed for packaging goods weighing 50 kilos. This means that the paper has to be very strong",

says Anna-Karin Magnusson.

She has also assisted during several converting and filling trials at cement plants. The results were very satisfactory and the market has responded positively.

"The fact is that we have succeeded in producing an extremely strong paper product, which reduces our customers' costs substantially", says Anna-Karin Magnusson. ■



TRUE PROTECTION. Nature is often the best packaging designer for demanding goods. Just as the oyster carries its pearl, Billerud QuickFill Xcel protects your products.



SOUTH AFRICAN SACK AND BAG PRODUCER NAMPAK SACKS:

“Paper quality is absolutely critical”



Paper quality is crucial for good productivity throughout the whole value chain.

This emphasises Stephen Hollinshead, Technical Manager of Nampak Sacks Division. And he should know. Nampak both converts paper into sacks and also runs the filling line process at the South African cement producer, NPC Cimpor.

Nampak Sacks is South Africa's leading supplier of paper sacks and self-opening bags. The Nampak group offers packaging solutions in every available material to customers around the world.

Stephen Hollinshead has tested innumerable paper qualities.

“We use papers from all over the world and we see the impact of both positive and negative quality”, he says.

Nampak Sacks uses a 2-ply high porous unbleached quality in the conversion process. He points out that the paper's quality affects the whole value chain.

“For a long time the market has mostly focused on price and specifications but

convertability is just as important for productivity. It has to do with waste, runability and utility and these parameters affect the results throughout the process.”

QuickFill sacks offer high productivity

The filling process makes high demands on the construction of the sacks.

Nampak runs the filling line process for the building material manufacturer NPC Cimpor, where they fill about 2,400 sacks per hour with 50 kg of cement.

“Cement is the most demanding material there is to pack, and much harder than any other material. QuickFill sacks offer high productivity in filling and cleaner sacks as there are no perforations”.

REQUIRES AN EVEN PROFILE

Stephen Hollinshead underlines the importance of a paper quality having an even, high profile.

“This is extremely important. Our plant in Durban is near the ocean where sometimes humidity can rise to 95 per cent, but QuickFill provides us with an even profile that isn't sensitive to this type of variations. It always behaves in the same way”, says Stephen Hollinshead. ■

HAVER & BOECKER recommends

high-porosity paper

Three factors must interact for an efficient filling process to take place – the customer's product, the machine's performance and the design of the sack. So says Thomas Hilling, Manager of the Research and Development Center at German machine manufacturer HAVER & BOECKER.

The German manufacturer of filling machines, HAVER & BOECKER, delivers machinery all over the world and its logotype is on 60 per cent of the cement industry's filling and sealing machinery.

QuickFill is a very good paper concept because of its high porosity and strength

“The main reason for investing in high-speed machines is that productivity can increase significantly. We offer a solution that provides our customers with very good results”, says Thomas Hilling.

HAVER & BOECKER's ROTO-PACKER® fast filling machines fill up to 5,500 50-kilo sacks per hour. This technology makes tough demands on sack construction when the product consists of goods in powder form.

“In order to have a good flow we need to support the



HAVER & BOECKER's state-of-the-art filling machines have a very good reputation. More than 60 per cent of the cement industry choose a HAVER & BOECKER hi-tech machine.

filling with air, and the air has to escape from the sack, therefore a high-porosity paper sack is very helpful.”

The amount of air added is approximately 50 litres per 50 kilo sack for products in powder form. But the total amount of air that has to be pressed out of the bag during filling is much more; it varies from 200 and 500 litres, depending on process and product.

RECOMMENDS TWO-PLY SACKS

“With a low-porosity paper, you have to make a lot of holes in the sack in order to avoid overpressure in the process. This can make the result less clean, and cleanliness is becoming increasingly important for the brand owners. A two-ply sack often ends up being stronger, cheaper and faster and we inform our customers about this”, says Thomas Hilling and adds that he always show his customers the QuickFill concept from Billerud.

“It's a very good paper concept because of its high porosity and strength. We also have fewer problems with broken bags during filling and discharge.” ■

POLISH MORTAR PRODUCER ATLAS:

“We need the best possible sack”

“Fast filling processes and flexible handling throughout the logistics chain make high demands on both the sack paper and sack construction”, says Dorota Domanska, Purchasing Manager at the mortar producer Atlas in Poland.

“We use a modern rotopacker with high filling speed. Consequently, we need the best possible sack that offers quick deaeration and good handling for internal transport”, says Dorota Domanska.

Atlas both converts its own sacks and has its own filling lines. Previously, the company used varying paper products, as well as 3-ply sacks, but now only uses a 2-ply QuickFill sack with a white QuickFill as the outer ply.

“It was important for us to reduce paper weight, and we could do this due to stronger and more porous paper. The next step is to look into whether we can switch to a 1-ply concept, something that is currently under discussion.

We need the best possible sack for quick deaeration and good handling

Dorota Domanska has noticed the increasing demands made on the appearance of the sacks and it is naturally important for Atlas to meet the market's requirements.

“The trend in Poland is towards up to eight colours with highly sophisticated print designs. This means that the paper must have a good printing surface”, she says and adds that the function of the sacks in the logistics chain is another important factor.

“Of course, it's also important that we optimise sack size so that we are able to fill the pallets as efficiently as possible. This reduces storage space for us and for our customers”, says Dorota Domanska who is very happy with the paper that Atlas uses today.

“I would place your paper first”. ■



SACK LAB

– at your service

Many sack designs and paper products have been tested at Billerud Sack Laboratory.

“Sometimes I’m surprised how much performance can differ between different sacks”, says Product Development Engineer Jonas Almkvist, who helps Billerud’s customers to improve their designs.



Jonas Almkvist

Billerud Sack Laboratory has a wide range of equipment for different types of tests such as a sack strength, filling speed and deaeration.

“We analyse the performance of our customers’ sack designs to see how we can correct any weaknesses”, says Jonas

Almkvist, who has tested innumerable sacks and sack designs.

“Sure, I’ve been surprised. A sack porosity and strength can often be doubled with the

right choice of paper and the right design”.

The tests include technical analysis in which several parameters of the customer’s current construction and manufacturing process are mapped. The results are given in the form of a report on the advantages and disadvantages of the customer’s sack design, possible improvements and what their impact would be on the customer’s operations.

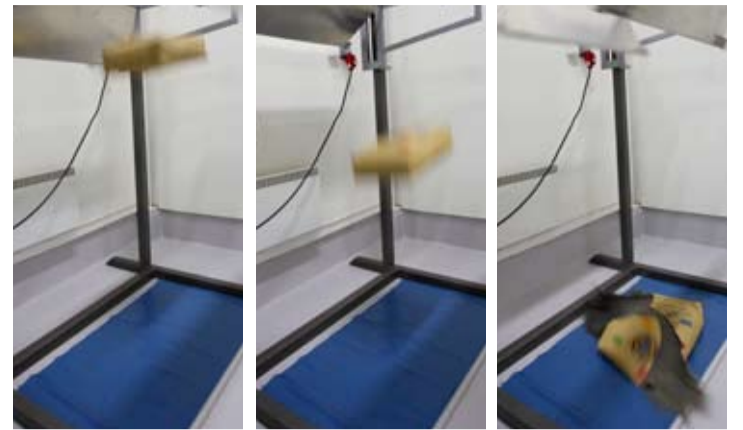
“OUR CUSTOMERS ARE SURPRISED”

“Many customers are positively surprised when they realise how cost effective it can be to change to a better paper quality”, says Jonas Almkvist, who invites more customers

to use the services offered by Billerud Sack Laboratory.

We invite more customers to use our resources

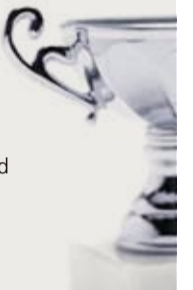
“For us, a broad range of know-how based on science is crucial. By understanding both strengths and weaknesses, we can get ideas about how to create new solutions and concepts”. ■



TESTING SACK STRENGTH. The Drop Test Rig measures how many times a sack can be dropped before it breaks. The tests are repeated in order to find a correlation. If the sack always breaks in the same place, there could be a construction fault.

PRESTIGIOUS PRIZE GOES TO QuickFill®

Most innovative product in 2009. Billerud QuickFill® has been awarded this prestigious prize by the mortar industry’s international trade association, Global Mortars. The jury’s motivation was that QuickFill gives the industry large added value and that Billerud has created a concept that benefits both end users and converters.



LOW CO₂

A paper sack made from Billerud paper has a net uptake of 215 grams of carbon dioxide per sack, according to an independent study.

Billerud’s emissions of CO₂ are in other words extremely low.

Sack paper with a record low Carbon Footprint

All Billerud’s sack papers are very good for the environment. With a renewable raw material from sustainable Scandinavian forests and efficient energy processes, Billerud has created sack paper with a record low carbon footprint.

“Billerud conducts far-reaching environmental work throughout the manufacturing chain. Our forest raw material comes from well-managed Swedish forests and nature conservation has been regulated by law since 1903”, says Patrik Bosander, Business Development Manager and environmental spokesperson at Billerud.

An independent study by IVL, the Swedish Environmental Research Institute, shows that all the paper products from Billerud have a record low carbon footprint.

“The uptake of carbon dioxide in our paper

exceeds by a wide margin the total emissions. This is due to the fact that we are very energy efficient but it is also a consequence of sustainable Swedish forestry”, says Patrik Bosander and explains:

“Forests that are managed and replanted absorb much more carbon dioxide than forests that have remained untouched for many years”, says Patrik Bosander, adding that the growth of the Swedish forests has increased by 50 per cent in the last 50 years. ■

The world as his workplace

Fredrik Hoff helps customers all over the world to make their production more efficient. He provides technical support and know-how for both converters and end customers.



Fredrik Hoff

Technical Support Manager, Fredrik Hoff spends more time travelling than he does in the office at the Skärblacka mill. His job is to provide technical service and share his knowledge of how to get the most out of using Billerud’s products.

“My goal is that the customer should buy the most functional and cost-effective paper bearing in mind the sack requirements and type of machines”, says Fredrik Hoff.

After visiting a customer, he always takes samples of the customer’s sacks with him and studies them back in

Sweden. They are usually tested in the Sack Laboratory.

He has noticed a recurring, easily corrected problem faced by many sack producers.

“When the customer switches from a three-ply sack to a two-ply sack, he needs to make a number of small adjustments, in particular reducing the amount of glue. Otherwise, gluing adapted to three-ply sacks will result in a surplus of glue. This makes the sack damp and the end customer’s filling process could be less efficient”. ■

SACK SOLUTIONS NEWS

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