

Efficient production units

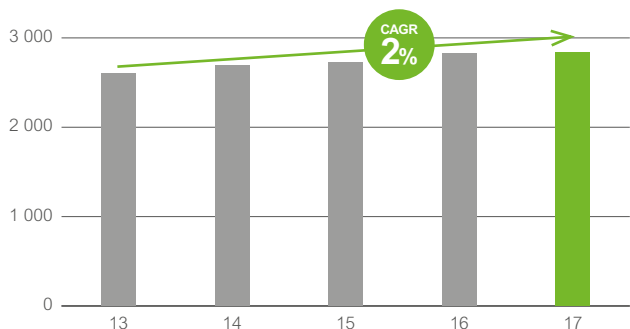
Stable production produces high quality in deliveries to customers. BillerudKorsnäs is investing in increasing and securing availability of the Group’s combined production capacity.

BillerudKorsnäs’ production units have extensive experience of paper and board manufacture. Cross-functional teams work continuously to improve processes and improve efficiency throughout the value chain. This work is carried out in parallel with identifying new opportunities for paper and board packaging and solutions for customers.

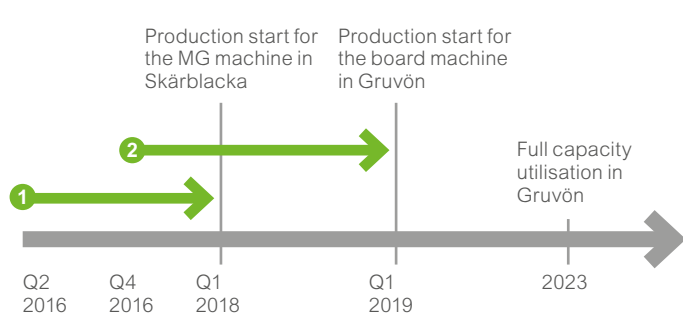
Since 2013 BillerudKorsnäs has, over and above ongoing investments, invested SEK 10.3 billion in its production capacity and has improved efficiency, quality and sustainability

performance. Two major projects, a new board machine in Gruvön and further development of MG paper production in Skärblacka, were approved in 2016. Their implementation involves an investment of approx. SEK 8.3 billion. These investments will ensure that BillerudKorsnäs is able to provide existing and future customers with sustainable packaging materials and solutions of the highest quality. The new machines will begin production in spring 2018 for Skärblacka and spring 2019 for Gruvön.

Production development – five years



Implementation plan



Production units	Beetham	Frövi and Rockhammar	Gruvön
	Manufactures packaging paper for medical equipment and food packaging aimed at users that require very high standards of purity, printability, sterilisation and strength.	Manufactures packaging board and liquid packaging board aimed at users with very high demands for efficient, creative and functional packaging solutions.	Manufactures fluting through Billerud Flute® and is a pioneering unit in several areas. Developed BillerudKorsnäs’ FibreForm®, for example.
Products	Kraft paper (flexible packaging, medical packaging, technical packaging)	Liquid packaging board, cartonboard	Kraft paper, sack paper, containerboard (fluting, liner), liquid packaging board, cup stock, market pulp
Market segments:	Industrial, Medical & Hygiene, Food & Beverages	Food & Beverages, Consumer & Luxury Goods	Industrial, Food & Beverages, Consumer & Luxury Goods
Production capacity	45 000 tonnes/year	470 000 tonnes/year	710 000 tonnes
Number of employees	140	640	900



Automated wood measurement

The pulpwood that BillerudKorsnäs purchases has previously been measured manually at each mill. With new technology for remote measurement, a digital camera checks the wood when it comes to the production plant or to one of the transloading terminals. This improves the efficiency of the measurements and wood logistics, while also lowering measurement costs. BillerudKorsnäs' production units in Skärblacka, Frövi, Gruvön and Gävle introduced remote measurement in 2017. Karlsborg will introduce the system in 2018.

Our production process

- 1.** BillerudKorsnäs manufactures packaging material using primary fibre from softwood or hardwood. The Group promotes sustainable forestry and only buys wood from well managed forests. In 2017, approximately 10 million cubic metres of wood were purchased.
- 2.** The pulpwood is debarked. The bark is recycled as fuel.
- 3.** The debarked wood is cut into chips.
- 4.** The pulp is produced by cooking the chips with chemicals under high pressure and at high temperature. During this process the lignin is dissolved and the fibres are released.
- 5.** The resulting pulp is cleaned and bleached in cases where the end product requires this. After cooking, the pulp is washed and screened to make it as pure as possible. At integrated production units, the pulp is pumped directly to the paper mill or paperboard mill.
- 6.** Paper production is carried out in three stages: forming, pressing and drying.
- 7.** The finished and cut paper reels or the pulp are packaged for delivery to the customer. In 2017, BillerudKorsnäs produced 2 930 ktonnes of board, paper and pulp.
- 8.** Deliveries are made by sea, rail or road.



- 9.** A large proportion of sales come from customers that convert BillerudKorsnäs' packaging materials in paper and board into various types of packaging for food, medical products, building materials, home electronics and so on.
- 10.** BillerudKorsnäs' primary fibre-based packaging materials provide sustainable packaging that is able to challenge conventional packaging.

Gävle

Manufactures liquid packaging board for beverages and food aimed at users that demand very high standards of stability and printability.

Liquid packaging board, liner

Food & Beverages

740 000 tonnes/year

900

Pietarsaari

Produces kraft and sack paper aimed at users that demand very high standards of strength, sustainability, flexibility, purity and printability.

Sack paper, kraft paper (bags, flexible packaging, technical packaging), liquid packaging board

Consumer & Luxury Goods, Food & Beverages, Industrial

200 000 tonnes/year

120

Karlsborg

Manufactures sack paper, formable paper (FibreForm®) and kraft paper aimed at users with very high demands for efficient, creative and functional packaging solutions.

Sack paper, formable paper, kraft paper (bags), market pulp

Food & Beverages, Industrial

320 000 tonnes/year

380

Skärblacka

Develops and manufactures everything from strong, porous sack paper to fluting and white machine glazed kraft paper with excellent printing properties.

Sack paper (brown), kraft paper, containerboard, market pulp

Industrial, Medical & Hygiene

460 000 tonnes/year

690