

NORBORD  
Inverness / GB

REFERENCE  
09.18

Together we make your project a  
**Story of success**

**640,000**  
m<sup>3</sup> OSB at Inverness

Complete delivery: OSB plant  
at Norbord / Inverness

Log Handling including Rotary Debarker,  
Chip transport and engineering.

NORBORD

**HOLTEC**

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**HOLTEC**



## Inverness 2.0 – Commissioning of OSB-plant

From Alberta, Canada to the Scottish Highlands...

Norbord based in Toronto, Ontario / Canada is one of the leading wood based product manufacturers and with its production volume of over 7 million m<sup>3</sup> OSB it is the biggest OSB producer worldwide. They operate 17 sites on three continents which generate a turnover of more than 1.8 billion US\$.

In 1999 they bought the mill in Inverness, UK which was the first Norbord site in Europe. In addition to being generally the first European site producing OSB, the mill in Inverness was also the first European one winning the FSC-certificate (Forestry Stewardship Council) for sustainable forestry. Beside the Cowie site which was also commissioned in 1999, Norbord enlarged its presence on the European market with the takeover of the site in Genk/ Belgium in 2004. Norbord's brand products are nowadays one of the most prestigious in Europe. They are used in the construction industry as well as in the DIY and furniture industries. Investments in machinery are part of the daily business for companies like Norbord. However, the investment in Inverness was one of the biggest challenges in the company's history...

### Unusual move...Relocation as an alternative to a new installation

80 sea containers, 6,500 tons transport weight, 152 trucks for the road transport – these figures represent a part of the high investment of about £95 million in the Scottish Highlands. Aim of this investment: Exchanging the multi-daylight presses for a continuous press and nearly doubling the production capacity of up to 640,000 m<sup>3</sup> / year.

Norbord chose for that idea an unused, new continuous Diefenbacher press at their site in Grande-Prairie, Alberta/ Canada which was ready for shipment within a few weeks. The machine was transported by truck through Canada and arrived in the harbour of Nigg, near Inverness, by vessel from Thunder Bay, Ontario, Canada. By January 2017, the machine parts had been assembled at the new site and modified by using new parts. Now the installation consists of the forming line, screening, gluing, CHP plant, drying and stacking.

### From engineering up to the chip transport

For this project Holtec got the order for the complete Green-End, i.e. for the whole log yard handling, debarking as well as for the transport of the flakes to the first bin.

The core part of the log handling up to the flaker, is the Vario-Barker Type VB 2\*10.500 / 2R / HY made by Holtec – the machine, initially presented at the LIGNA 2013, has been sold 15 times now. The main feature is the continuously adjustable work angle of the machine allowing to adapt the dwell time of the logs in the machine, the throughput as well as the debarking degree. These arguments finally convinced Norbord's technical team – and so the Holtec rotary debarker was chosen instead of the originally planned integration of the existing drum debarker.

As flaker, a knife ring flaker was used, which was modified before installation. Holtec finished the electrical and hydraulic integration of the machine in cooperation with the flaker specialists. The capacity of the machine is about 30 to. b.d./h. The chip handling may be considered superlative for Holtec: The double chain conveyors were mounted at dizzy heights. The drive station of the main conveyor protrudes up to 35 m high – only professionals free from giddiness were able to do the fitting. Welded off-set flat link chains from Canada were used for the conveyors because of the experience Norbord had already had in Genk. There, Holtec is gradually adapting the conveyor systems to the "Canadian standard" for several years now.

In addition to the machine equipment, engineering was also a particular challenge. On the existing premises, a sensible project and process flow had to be found, considering the existing buildings. Holtec worked out the complete engineering documentation – starting with the necessary static calculations for the steel construction up to the system control based on Rockwell /Allen-Bradley.

Following the replacement of the log feeding in Genk in 2015, this investment is already the second major order within three years. The result – another proof of the good cooperation between the two companies.

### Production started as scheduled

The entire construction project was completed as scheduled late summer of 2017 – the first board ran the line in September and production started in October.

"The modernised and expanded capacities in Scotland will make us much more flexible and will give us the opportunity to deliver more of the volumes produced in Genk to Germany and other core European markets." said Reiner Kohlwey, Director Marketing & Sales of Norbord in Germany, Austria and Switzerland. "As the demand for OSB boards is continuously growing, especially in the German-speaking area, we are very glad that the production in Inverness has started smoothly after such a short construction period."

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