

EFFICIENT WASTE EXTRACTION

G&G PREISSER PLACES ITS TRUST IN HÖCKER POLYTECHNIK

Founded in 1907, G&G Preißer GmbH is a medium-sized packaging manufacturer. The family business is based in Rhineland Palatinate, Germany and manufactures customised corrugated packaging which is delivered to customers on the just-in-time principle thanks to efficient logistics processes. Such logistics requires a lot of space and after all expansion options were exhausted, the business

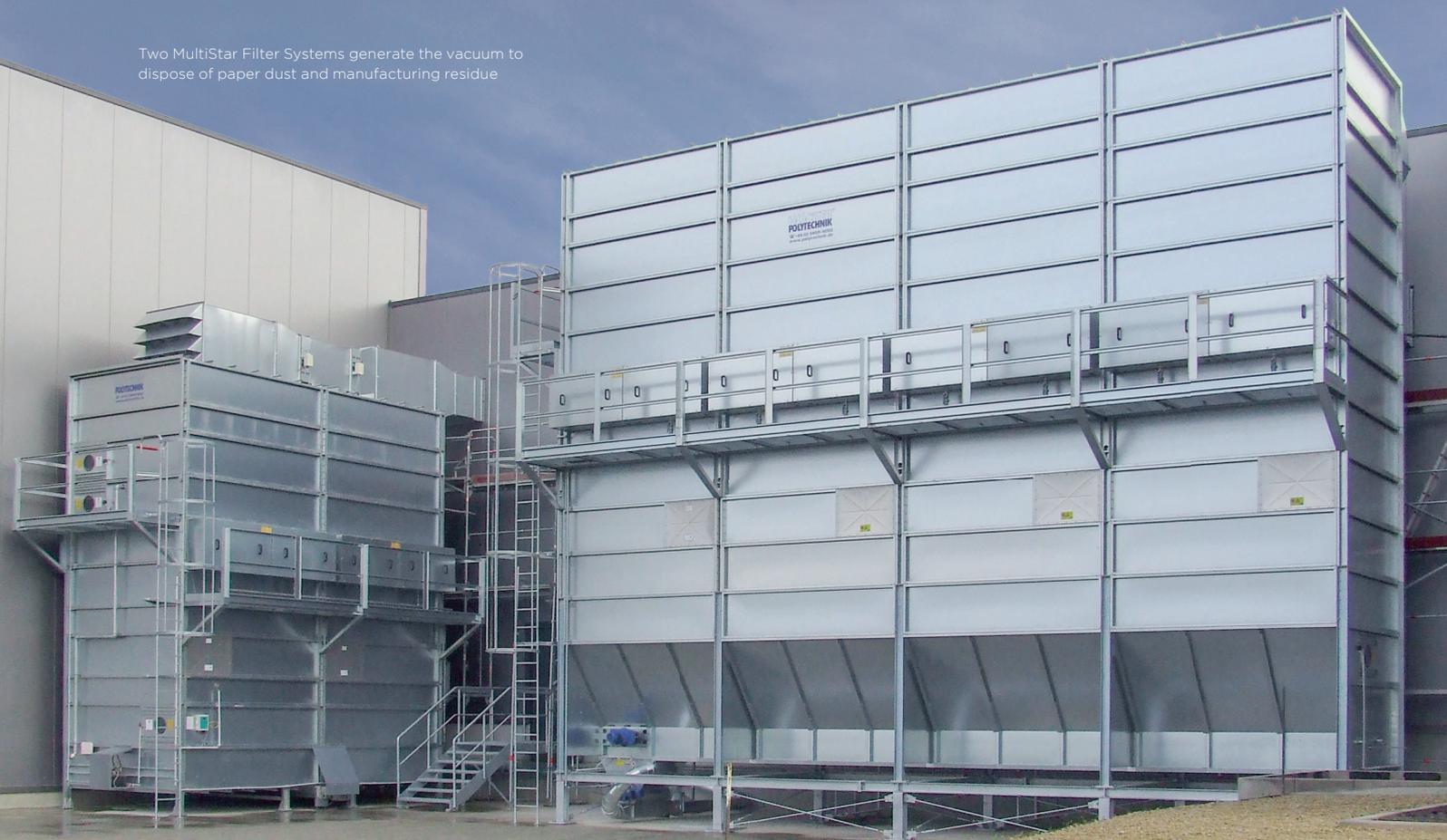
decided to build on a green-field site. The new building opened for business in mid-2017 providing additional space for a new logistics centre, space for state-of-the-art manufacturing facilities and space for future growth.

Preißer lays great emphasis on clean manufacturing conditions and called in Höcker Polytechnik GmbH early on when the project started to come up with an innovative waste management concept for dust and

manufacturing waste. They integrated eight pneumatic disposal highways (five lines with \varnothing 300-500 mm for disposing of die-cutting waste and three lines with \varnothing 800 mm for removing dust), thus creating an energy-efficient vacuum disposal network with practical features perfectly suited to the 24-hour operational cycle of corrugated packaging manufacture.

Marc Biehl, Project Manager at Höcker Polytechnik explains, "Preißer brought us on board right at the start of the project. This allowed us to realise their requirements for an inconspicuous yet efficient dust and waste disposal system. In the new building, material flows are now disposed of 100% pneumatically. We were able to efficiently implement this extremely clean solution as we could position the cable routes and connection points wherever we wanted throughout the early stages

Two MultiStar Filter Systems generate the vacuum to dispose of paper dust and manufacturing residue



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MARC BIEHL, PROJECT MANAGER AT HÖCKER POLYTECHNIK

of the project. We also found the best place in the building for the dust filtering systems. The system has now been up and running for six months with no major complications – it was an exciting and successful project.”

Modern Manufacturing

At the new plant, G&G Preißer operates five inline converting lines. High performance printing and die-cutting machines process up to 140 million sqm of corrugated every year. Two of the lines produce larger waste offcuts, which are shredded directly at the machines with Höcker's PHSS special shredders. There are no underfloor belt systems – waste is transported under vacuum to the disposal highway and prepared for recycling.

In the recycling centre, a Höcker material separator divides the coarse material from the air stream and feeds it, unpressurised, into the horizontal Höcker HPK75 baler that produces recycling-friendly bales. There is also a large PHS shredder in the goods receipt department, which employees can handily use to shred accumulating paper that is then fed under vacuum into the baler.

Two MultiStar Filter Systems generate the vacuum for all the plant's disposal processes.

The two filters work together to share the burden – one generates the suction capacity for the manufacturing waste while the other specialises in paper dust.

The filter system responsible for transporting the material operates with a suction capacity of 52,000 m³/hr and uses a filter surface area of approximately 350 sqm. The four highly efficient 30 kW (IE3) clean air ventilators are integrated into the top of the filter housing and generate the vacuum required for material transport. The filter tubes are cleaned using pressure pulse jets and the paper dust is compressed into briquettes using a BrikStar briquetting press.

The MultiStar dust filter system has a filter surface area of 840 m² and five 22 kW (IE3) clean air ventilators, delivering up to 130,000 m³/hr of suction power. Here, too, the filter pipes are cleaned using pressure pulse jet technology and the dust discharge is directed to the partner filter. The powerful briquetting press processes the dust from both systems.

Energy Efficient

Both the filter systems and the control technology have been adapted to save energy. Each connection point in the plant is provided with sliders which report each machine's activity to the control centre which then adjusts the machine's ventilation performance by means of cascade connections and frequency control. Thus, each kilowatt of ventilation power is used exactly where it is needed. Valuable thermal energy is also retained and during the colder months the purified air is pumped back into the building. This noticeably reduces heating costs. Operators can call up essential information about the status of the plant at any time via two large touch panels on the control systems.

For Tobias Preißer, Managing Director of G&G Preißer GmbH, the project has been a success. “When planning the new plant, we focused on three things – increasing productivity, optimising working conditions for our employees and eliminating dust from the manufacturing areas. For this reason, we included Höcker Polytechnik on the project team right from the start. It soon became clear that only a fully pneumatic suction solution would meet our needs. We were able to rely on Höcker's installers during all phases of construction. The disposal system was prepared as a plug ‘n’ play design, which we were easily able to connect to our machinery. Today, we are profiting from our state-of-the-art, clean manufacturing processes and automated disposal system that offers the best possible manufacturing conditions for our customised packaging solutions.” ■



Shredding paper sheets quickly and easily with the PHS Shredder