

New Fabrication and Extraction Technology



Investment of Pante Furniture Factory

The Pante furniture factory in Schleddehausen, Germany is a supplier for the furniture industry, specializing in the fabrication of furniture carcasses and the assembly of prefabricated furniture components.

Founded in **1894**, the company is owned by the family's **4th** generation today. After producing kitchen and bedroom furniture, it has converted entirely to supplying the furniture industry since the beginning of the eighties.

Production has been ongoing on plant premises of more than **30,000 m²** since **1995**. A highly modern train of machines and consistent quality management guarantee time and cost-effective processing with the highest product quality. With these characteristics, Pante has made a very good name for itself with many furniture manufacturers.

In the course of further investments in modernizing the train of machines, with a **70 m** long double-sided edge processing machine using laser technology, the extraction and filter system also had to be modernized in the spring of **2012** to en-

sure optimum extraction for the new IMA line.

Since the two companies have a business relationship based on partnership that has been established for many years, Pante chose the equipment manufacturer Höcker Polytechnik from Hilter am Teutoburger Wald in Germany. In weeks of detailed work, the planners at Höcker developed a requirements specification for the new filter system in cooperation with Pante.

The highly streamlined and therefore space-saving design, a very quiet system and low energy consumption took centre stage while taking into account all regulations and meeting the requirements of DIN EN **12779**, the Employer's Liability Insurance Association Information (BGI) **739** and ATEX.

During the summer plant holidays, the manufacturer then realized a filter system of the successful MultiStar model series with continuous filter cleaning by means of low-pressure purge air – down to the day and precisely matched. This filter cleaning method distinguishes itself with highly effective purging of the filter hoses while simultaneously covering the neigh-

boring hose rows. It ensures consistent very low filter contamination for the operator, resulting in optimum performance of the extraction fans.

Purge air filter cleaning is also particularly quiet because it is integrated in the filter housing. The filter cleaning itself is controlled by differential pressure, minimizing energy consumption from this aspect as well. Filter cleaning only begins once the contamination level of the filter hoses reaches a level stored in the program. Thanks to this control method, Pante saves even more energy on filter cleaning.

The extraction capacity of **85,000 m³/h** is realized with two high-performance fans with a maximum efficiency of **84%**, set up in sound dampening booths. A highly modern Siemens PLC controller ensures fully automated operation of the entire system.

The entire system with the required pipework for the new production lines was realized by the Höcker installation team, exactly within the time allowed, so that Pante was able to put the new lines into operation right on schedule.

After it was put into operation, sound measurements were taken on the Höcker system. At approximately **70 dB(A)** at a distance of **1 meter** from the system, these actually fell below the expectations and calculations of the Höcker planners.

About

The German manufacturer has been designing, planning and constructing systems for process waste disposal and air purification for industrial and crafts enterprises since **1962**. These range from mobile dust extraction systems to large-scale filter systems with capacities of more than **500,000 m³/h**. The company's production and delivery program also includes large briquetting presses and shredding machines.

High energy efficiency of the systems and machines built by Höcker was emphasized in development and production from the outset. The cornerstone for the continuous further development of energy-saving systems was laid back in **1962** under the company Günther Höcker oHG with

the sale of so-called “individual offtakes” in the wood processing trade. In-house fan construction is the heart of production.

With the first energy crisis, the company quickly grew to more than **50** employees. Today over **150** employees at the parent plant in Hilter am Teutoburger Wald and in the regional sales offices are responsible for the development, sale, fabrication, installation and putting into operation of the machines and systems. The company has been managed by Frank Höcker, son of the founder, since **1993**.

Applications for the dust extraction systems and units as well as the briquetting presses are found in numerous industries such as wood processing, large-scale printing shops, bookbinding shops, metal processing and also the packaging industry or the field of environmental technology, e.g. the recycling sector and biomass utilization. Shredders have been manufactured especially for the needs of corrugated cardboard and cardboard packaging production.

They have designed, planned and built approximately **45,000** machines and systems to date. These are used by industry and trades around the world today.

Most of their products are manufactured at the parent plant in Hilter, the secondary plant in Bad Laer and a third plant in Lower Silesia, a subsidiary. Extensive vertical integration ensures high flexibility and short delivery times with competitive cost structures. Modern automated sheet metal processing centers and manual fabrication go hand in hand. In-house controller fabrication and comprehensive engineering with the company's own experts ensure high functional reliability and worldwide support you can count on.



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