

Even a door has inner values

Westag & Getalit AG not only produces doors - it goes a step further by offering enormous product diversity. This is something today's customers are increasingly coming to expect. Living rooms afford an insight into the personality of the home owner, and doors form a central element of this. The wide differences in customers' personalities are reflected in their individual expectations – which have to be addressed by the plants used to produce the doors. Designing the plant which would do just that was something of a challenge for the HOMAG Group Engineering team.

Bespoke tailoring is not reserved to suits alone

"Exceptional production flexibility, topnotch product quality, implemented on machines which will go on representing the leading edge in machine technology in the future - that was our brief", recalls Klaus Zahn, Project Manager at HOMAG Group Engineering.

The product range at Westag & Getalit AG focuses on living space and technical doors - from smooth internal doors to country mansion or designer doors, whether in a single-leaf, double-leaf or sliding door version. The manufacturer's product portfolio includes for instance its "PortaLit" door and frame range, characterized by exemplary quality and with an impressive 40-year track record. At the same time, this range of HPS-coated doors and frames offers a prime example of successful variant diversity: With a total of 28 decor finishes, this product is available to customers in every conceivable surface and edge configuration, offering the ideal overall package to address practically every application. The focus on aspirational quality and customer benefit has been pivotal to the success of this brand - with an impressive 40 year pedigree. Coupled with a market-oriented eye on the development of new decor and surface finishes, the manufacturer offers the right solution to address almost

every kind of preference or application - from classic sophistication through to eye-catching contemporary design.

"As a full range supplier in the field of living space and technical doors, we offer our customers individually tailored solutions from a single source. We produce not only large and small series, but also bespoke products in batch sizes as small as 1", says Thomas Küsterameling, Project Manager at Westag & Getalit.

The pivotal role played by production time comes as no surprise considering the services offered by the manufacturer's fast-track supply range. With its "Avanti XXL" range, Westag & Getalit AG offers doors and frames within a delivery window of just three to ten days - both for its high-performance and living space doors. The high number of different variants coupled with the extremely short delivery periods calls for a high level of competence and efficiency in production.

Investment with a system: Among Europe's biggest door producers.

With a workforce of just under 1,300, a turnover in excess of 227 million Euro in 2011 and three divisions - Plywood/Formwork, Laminates/Elements and Doors/Frames - Westag & Getalit is an established presence in the market. The company, based in the Ostwestfalen region, may claim to be one of Europe's biggest producers of doors. Production takes place in Rheda-Wiedenbrück.

"When we decide to make an investment, we do it systematically. We keep a close eye on the developments taking place in production engineering and perform a detailed analysis of all possible options. For us, taking this much care in advance generally pays dividends in the long run. Because new technology doesn't just mean a promising investment, it also has to suit us and comply with our individual specification brief. Because what our customers expect from us is not just the accustomed standard of quality, but delivery with a minimum waiting

time", explains Thomas Küsterameling.

Experience already gathered to date clearly shows that the procurement of a new HOMAG Group plant in April 2011 was the right decision. "The question for us is always how customer expectations can be most cost-effectively and efficiently fulfilled with the aid of modern technology. This is why we are always on the lookout for optimization potential, but only where it serves the best interests of our customers - in other words in terms of product diversity and delivery periods. This is a key element of our corporate philosophy. With the new door production plant from HOMAG, we are able to manufacture products to the very latest technological standard - with our accustomed degree of efficiency and to an excellent standard of quality. This can only be of benefit to our customers", explains Thomas Küsterameling.

This underlying concept was transposed by a joint project team into a detailed plant technology brief and implemented with absolute professionalism by the HOMAG Group Engineering team. With this new high-tech plant, the manufacturer is sending out another clear message about its efficiency and processing quality.

Diversity and volume

The new door plant forms one of the highlights in the production halls of this door manufacturer based in Ostwestfalen, and has been in trial operation since the first quarter of 2012 producing three different profile shapes. Complying to the highest technological and quality standard, it is producing flush closing doors as well as rebated doors with rectangular and round edges, and preparing rebated doors with round edges for manufacture. The plant produces doors with a length of up to around 2,100 mm and a width of appr. 1,100 mm for its customers across the whole of Europe. "The doors that roll off the plant can have wide-ranging different measurements. Also remarkable are the differences in the door weights: It makes no difference whether they weigh 20 or 100 kilos",

explains Klaus Zahn. Only in this way is it possible to implement the wide variety demanded by customers using the new plant, for example from the fast-track delivery range "Avanti XXL", which encompasses everything from living space doors through to functional doors.

At remarkable speed up to maximum output

For the new plant, producing several doors a minute is child's play. One of the features making this possible is high-speed changeover between profile shapes taking less than a minute. Just as extraordinary is the "resetting in the workpiece gap" facility, as the plant only resets the top pressure beam after a 3 mm thickness difference. This makes 3 mm thickness differences in workpieces possible without the need for top pressure beam adjustment, meaning that the machine does not need to "run empty".

The route from the raw panel to the finished door starts with a belt conveyor with a downstream unit for trimming the reference edges. This step is instrumental in ensuring precise further processing to a premium standard of quality, as the reference edge router processes the longitudinal edge of the door to ensure that the dogs engage with the utmost accuracy on the downstream cross machine and act as a stop edge on the width-dependent fence for longitudinal throughfeed. This process generates the reference edge in a separate work step before the actual processing operation begins.

The HOMAG KFR 623 for flexibility and performance

With the HOMAG KFR 623, the company enjoys the benefit of a door machine designed for maximum output with just-in-time production. Workpiece guidance along the dog rails ensures a high standard of precision - even with extreme part dimensions. The dogs are steplessly adjustable. This allows the transport chain to safely convey even softforming parts or profiled components through the machine without damage.

At Westag & Getalit, routing of the reference edge is followed by HOMAG KFR 623 in the form of a one and a half-sided machine for transverse processing of the door leaf, in other words processing of the door threshold and head side. Here, a wide variety of edge configurations are produced - amazingly in only a single pass at a speed of over 20 m/min.

HOMAG KFR 610: Width-independent and flexible

After transfer using an offsetting station, a highly flexible, smart infeed system guarantees adherence to a resetting gap of just 1,000 mm. The workpieces then pass through various processing operations - performed by two one-sided HOMAG KFR 610 plants for longitudinal processing of both sides. These are also able to take wide-ranging different profile configurations in their stride.

During throughfeed, the machine is supplied from a multiple magazine, making widely diverse production part of the plant's standard capability. The overhanging edge is monitored continuously by sensors, while any occurring folds at the vertical rebate edge are detected immediately and returned for reworking. A special labeling system is also in use in the processing line. This guarantees reliable part tracing through the entire plant.

Another highlight of this high-tech plant is the tool service life determination function. This meticulously records the service life of tools and provides an indication of the need for an impending tool change.

Perfect symbiosis of design and technology - inner values

"What our customers appreciate about our products is the unique diversity of surfaces and decor finishes, the different styles and the broad scope we offer for bespoke solutions - and all within our proven fast-track delivery range AVANTI XXL. There is practically no other supplier in the market able to offer the scope afforded by our production facilities. This is a decisive benefit", sums up Thomas Küsterameling. "Our expertise, coupled with the competence of our partners on the machine side, and particularly HOMAG, means that we are

ideally placed to supply the quality and short delivery periods our customers want. There are two things which have to be borne in mind here: The design represents the outer value of a door element, the customer's initial objective perception. But we give the door something more: we give it inner values in the form of sophisticated technical features. This allows us to offer our customers scope for creativity, for designs which are sometimes able to realize something which may have seemed unachievable.

HOMAG Group Engineering: Where everything comes together

The HOMAG Group Engineering has already planned and implemented 60 complete door factories around the world.

Project processing by the HOMAG Group Engineering team offers a whole raft of decisive benefits. As a system supplier, the team offers everything from a single source: Design and planning, implementation and aftersales support. Direct access to the expertise of all the group members opens up scope for trouble-free networking of individual components or their integration into higher-level systems. At HOMAG Group Engineering is where all these threads come together - a competent project management team ensures optimum coordination. The benefit for customers: a single point of contact with responsibility for all plant components.

HOMAG Group Engineering designs all production lines specifically to address the individual requirements of the customer, and provides support during installation and commissioning. In this way, solutions are guaranteed which comply precisely with customer requirements – including control engineering and software and all the necessary handling, transport and logistics facilities to create an individually tailored production system.

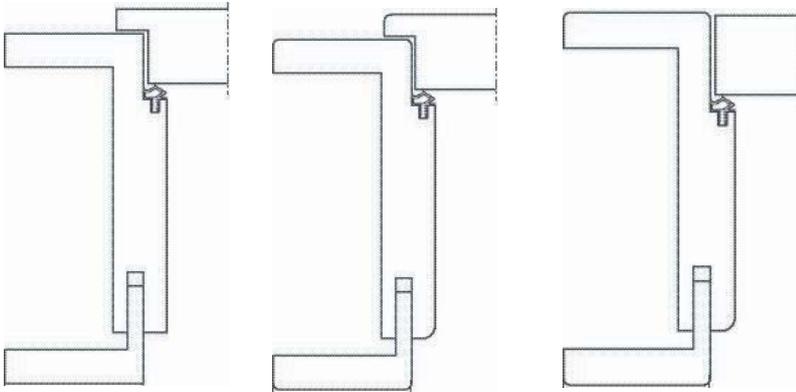


Fig. 1-3:
Both rectangular and round edges, as well as flush fitting door leaves are produced on the new plant.

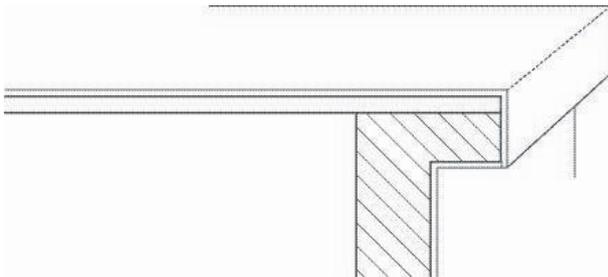


Fig. 4:
Profile shape: Rectangular edge

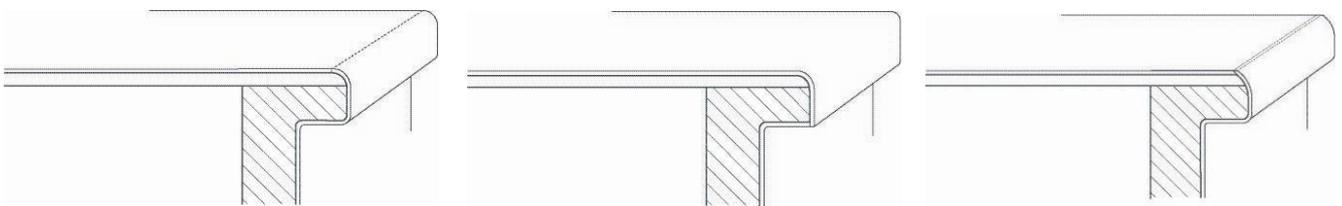


Fig. 5-7:
Profile shape: Round edge. Here the manufacturer offers three different versions within its product range.



Fig. 8:

One of the benefits of the new plant for Westag & Getalit AG has been to further expand the scope of its successful PortaLit range, in existence already for 40 successful years.

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