

## **HOMAG window technology – flexibility plus performance**

**CNC processing centres used for window construction provide the assurance of quality, flexibility and high performance – with up to 100 window units per shift!**

Over the past 5 to 6 years, CNC processing centres have increasingly become an established feature of the window production sector. The HOMAG Group alone has successfully commissioned **over 200 of its processing centres** in window production workshops. The reasons for their increased popularity are their outstanding flexibility (window, front door and furniture production on one and the same machine), reliable machine capacity utilization and the facility for combining several different work steps (profiling, drilling, rebating, trimming operations for hardware etc.). Frequently, up to 5 work steps can be executed simultaneously, cutting out around 50% of the otherwise necessary handling operations (**Fig. 1**). Complete processing of individual components also permits a marked improvement in quality due to single part lacquering and processing operations performed at the resting workpiece.

To make entry into this highly economical production method easier for window manufacturers, with its Venture 12L (**Fig. 2**) HOMAG has developed a high-performance processing centre with a complete equipment outfit for the individual production of not only windows and front doors but also furniture, staircases and interior fittings.

The Venture 12L can also be used for large workpieces with dimensions of up to L = 4,175 mm, W = 1,700 mm, H = 300 mm, and in conjunction with a high-performance trimming spindle (18.5 kW output and max. 24,000 rpm) covers the whole range of requirements. A Venture 12XL is also available as a variant with a larger processing length of 6,175 mm. This

makes processing upright and transom constructions possible in a single work step. The machines are equipped as standard with the features required for window construction. Alongside a high-speed 30-slot chain changer for several window systems, a special window clamping system and a patented LED display for simple clamping element positioning can also be used.

### **powerProfiler high-performance processing centre**

With its powerProfiler (**Fig 3**), HOMAG has launched a truly high-performance processing centre capable of fully automatically processing 3 workpieces simultaneously – adding up to around 400 workpieces = 50 window units per shift. This processing centre also retains absolute flexibility for processing straight and arched window components as well as upright and transom constructions and front door leaves.

### **New compact powerProfiler variant**

Alongside the variant presented at the Fensterbau frontale with processing dimensions of 6,250 x 1,525 x 300 mm, a powerProfiler with smaller processing dimensions is now also available in a length of max. 4.400 mm. Here, too, every conceivable type of window system can be completely processed. To address the growing degree of profile versatility, the multiChain tool changing system is also available with storage facility for up to 432 tools.

The powerProfiler also demonstrates its outstanding flexibility in the complete processing of front door blanks. As well as profiling, all trimming operations for hardware and light cut-outs are performed fully automatically. The total processing time required per door leaf is only around 10 minutes.

Scope for combination with a four-sided planing machine allows the new high-end HOMAG processing centre to be used as production line which takes care of all the required cutting operations. Additional operating steps such as rebating, trimming of special profiles on tabletop trimming machines, drilling operations for hardware mounting and connecting holes for dowel driving are all eliminated, reducing costs, particularly for handling, and preventing damage to the workpieces.

### **Economy through minimized personnel and energy input**

The enormous flexibility offered by these processing centres ensures optimum machine capacity utilization and so helps improve overall economy. Another factor contributing towards economical operation is the low manning level needed, with only half an operator required to supervise the processing centre's operations. This means that a single operator is capable of producing, for instance, around 50 window units on 2 Venture 12 machines or 100 window units on 2 power**Profilers** per shift. The processing motors and extraction system only run with optimized use of resources when operational, so guaranteeing low energy consumption.

### **Broad experience in system integration**

HOMAG has extensive experience in the integration of its plants into existing production set-ups, and has successfully completed link-ups to over 20 different trade-specific packages. Here, the plant automatically adopts all the workpiece data both for profiling and also for complete hardware processing.

## Future proofing

Another highlight of the new processing centres is their facility for upgrading to 5-axis functionality with a patented FLEX5+ five-axis unit or a 5-axis processing spindle with 15 KW (**Fig. 4**). These permit fully automatic and precise execution of, for instance, trimming operations or shift cuts at any optional angle.

With growing performance requirements, a number of processing centres can also be interlinked (**Fig. 5**), allowing the optimum use of synergies for tools, master data, programming and data link functions. When producing using several processing centres, the resulting redundancy allows customers to practically guarantee 100% delivery capability.

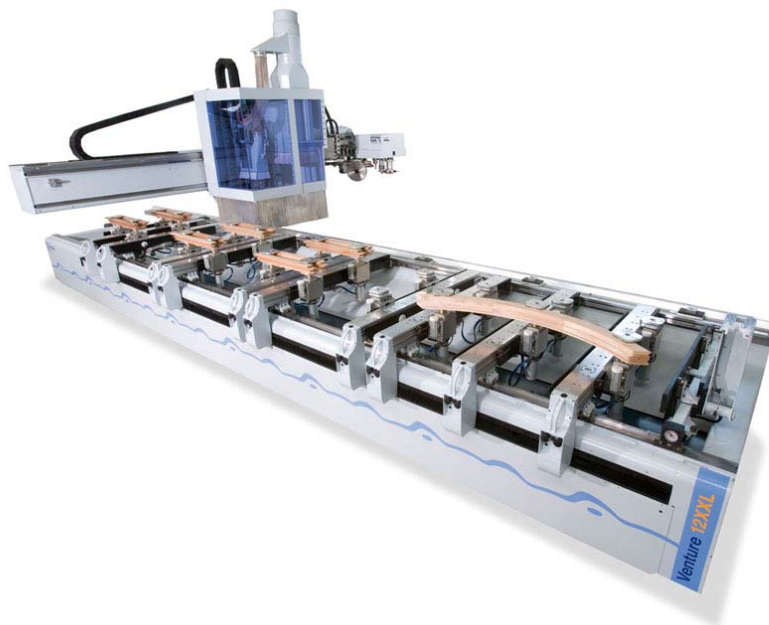
## Summary

By offering a complete solution for window construction in the form of the Venture 12 and the power**Profiler**, a range of processing centres is now available which are ideally suited for “non-standard window production” and also for complete structural element manufacture. The wide-ranging application possibilities of processing centres help improve machine capacity utilization as well as opening up wide-ranging different options for other products. Fast commissioning and a worldwide servicing network covering over 70 countries with a team totalling some 1,100 service personnel ensure optimum system availability and investment security for window producers.



**Fig. 1:**

Process integration for greater economy - 50 % lower handling costs



**Fig. 2:**

Venture 12 processing centre

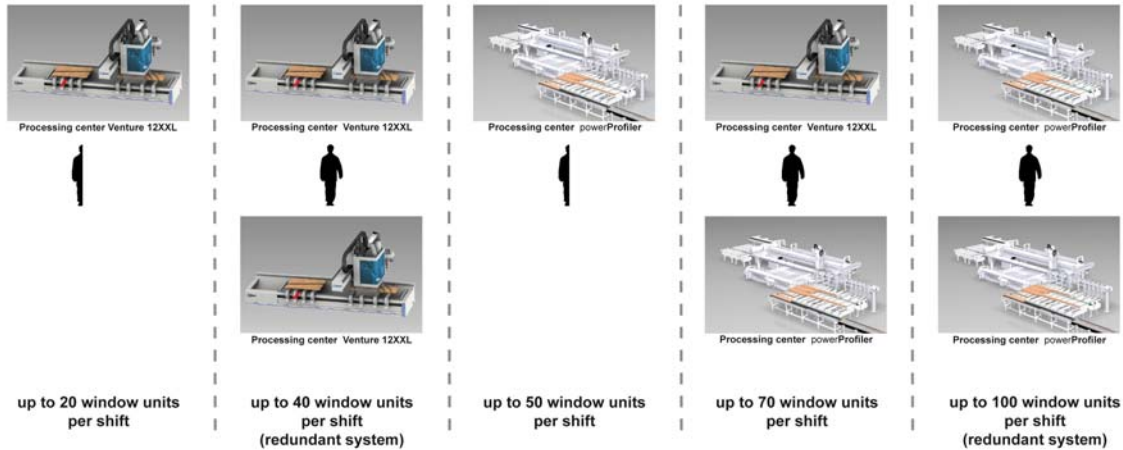


**Fig. 3:**  
powerProfiler processing centre



**Fig. 4:**  
Lock case trimming with DRIVE5+ five-axis trimming spindle

Power levels for window and facade production



**Fig. 5:**  
Performance steps

**For more information, contact**

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