

## Wolf Fenster, Working Process and Oertli: a perfect team game



CNC-Line works in perfect harmony with the Tools. In South Tyrol, window manufacturing is different to what you would see in Germany or Austria. The installation of the window is done with a sub-frame. To be able to produce those sub frames most efficiently, Wolf Fenster decided to invest in a new CNC-line.

According to director Walter Wolf, the efficient production of sub-frames was not the only reason for them looking for a new CNC-line. "The demand for special designs has been steadily increasing over the last few years. Additionally, one of our existing lines was old and needed replacement." Wolf found what he was looking for in a machine by the Italian producer Working Process in Niviano di Rivergaro. Oliver Rihl from Linz, Austria was responsible for the project management and bringing the machine into service. "Working Process could fulfill all our expectations looking at the different kinds of products that will be produced with the new CNC-line." says Wolf, giving reasons for his decision. But every (wooden-) product is only as good as the tools it was made with. For this reason, Wolf stays true to his tool supplier Oertli in Switzerland, who has been his partner for 30 years, and their Agent Reto Riedberger, director of Arnold Hohl AG in Lüttisburg, CH.



With the new CNC-line by WP, model Logos Life Evo 3563 Wolf is primarily producing three products:

- Sub-frames – with WP there are new possibilities
- Sliding doors – more efficient production than before
- Folding shutters – also more efficient production

Additionally, Wolf wants to establish a new kind of composite window, which will be made by the Logos Life Evo as well. It will be similar to a wood+aluminum window, however the aluminium cover on the outside is being replaced by a wooden frame. He didn't want to give us any more details though saying "We would like to promote wood in the sector of composite windows. And with the new machine we have the possibility to do that." The variety of products was a big challenge for the design of the new CNC.line. Wolf says: "in the beginning I was a bit sceptical but WP convinced me and the line is working flawlessly."

#### Production without man:

In times where both the shortage of staff and the costs of energy and raw materials are increasing, an efficient production is essential. With an optimized process of cross-cutting and stashing of the raw pieces as well as a full automatic outlet and buffering of the finished pieces, WP is reaching a peak in industrial efficiency. Only one man is necessary to operate the machine. And this one man does not have to stay there at all times. Is there enough raw material available, the Logos Live Evo can also work through a whole night easily – on its own. "With this, the machine can work autonomously." Rihl confirms during the sighting.



As mentioned earlier, Wolf Fenster has been working together with OERTLI for many years. “This tool specialist is probably one of our oldest suppliers.” Wolf says, certifying OERTLI’s reliability. “Our customers are looking for high quality products. We are doing the same with our suppliers.” The tool magazine of the Logos Life Evo provides space for up to 248 drilling or tenoning tools – all by OERTLI. With some tools, Wolf decided to go with OERTLI’s newest technology: CAT-Centrifugal Applied Technology. The name indicates a new approach in designing industrial tools.

Up until now, centrifugal forces that apply through the rotation of the tool and carry the blades to the outside were a big challenge for every tool designer. “OERTLI knows that cutting speeds of up to 120m/sec can cause centrifugal forces of several tons for the tool.” explains Riedberger. The blades had to be tightened very strongly to the body of the tool so they wouldn’t move with such high rotation speeds. CAT is now using this knowledge. The tip of the knife is designed in a way that it pushes against the mounting during the rotation so it stays in its exact position at all times without having to adjust it afterwards. The physical forces provide the optimal tension. CAT allows cutting speeds of up to 120m/sec and allows higher feeding speeds with the surface being perfect at the same time. Additionally, the user gains flexibility: “The tools can be used with or without chip-breakers says Riedberger giving details. The blade finds its perfect position with help of an intelligent positioning- and self-centering system. This new, patented solution is gentle to the machine and helps avoiding accidents.



#### Allround machining:

With the variety of tools and the well thought out technology of the LOGOS LIFE EVO Wolf can work a wide range of products. “The size of the pieces does not matter to the machine” Rihl explains. It works small frames of 18x40mm or cross sections of sliding doors with 60x200mm. The LOGOS LIFE EVO at Wolf Fenster is designed to be able to work pieces with a length between 0,2m and 6,3m. Therefore it’s possible to work either ten short pieces or also very long ones at the same time, all within the same cycle. The line is equipped with three portals as well as five tenoning motors – three of those tilting to be able to use the tools the best way, allow complicated processing and to optimize the surface of the piece. The CNC-line is getting the data from the order preparation. The loading and the first processing starts at the optimized cross-cutting machine, that is integrated in the Supervisor by WP. It cuts the pieces in reference to the order lists. Afterwards, they are automatically stocked in the “intelligent multilevel buffer” that contains several hundred pieces.

The system stocked the pieces independently in a ‘chaotic’ pattern. “A day’s production can be produced effortlessly.” Rihl explains. The manipulator with clamps can load up to ten pieces into the machine at the same time. Then they go into the actual work centre of the machine. One highlight is the special shape of the clamps: WP designed them in a special way so that all tools can get to the pieces along the curling contour to avoid tearing the edges. The result is a clean edge due to also the vibration-free clamping by the massive clamps. Up to five

tools can be used at the same time, which allows extreme flexibility, because the workload can be split up between to lose less time. After being finished, the pieces are marked to be able to assign them to the right order and then exit the machine to be put into another multilevel buffer that can take up to 300 pieces.

“Our line is the perfect mix of flexibility, enough capacity and a well thought through production process.” says Massimo Schiavetta, CEO of WP. The goal is to also integrate pre- and post-processes into the line, not just the work itself.

Since May 2018, the Logos Life Evo has been producing for Wolf Fenster after a quick installation and launch – all to the satisfaction of the director. He is complimenting the reliability and the cooperation with WP and OERTLI. “They were very open towards our wishes and everybody worked together.” says Wolf.

“this way we got something that was very difficult to establish. Our new production is very flexible, but still has enough capacity reserves.”

