

December 2008

Press release

World's fastest "Lean production" system for aluminium bars, sold and delivered to H-Fönstret, Lysekil, Sweden!

H-Fönstret in Lysekil, one of Sweden's leading supplier of aluminium/wood windows and doors has signed an order for the "Worlds fastest" flexible / robotized manufacturing line for aluminium bars.

Key-systems in Nässjö, Sweden, develops, designs and delivers this highly productive machine-line called "Flowline". Start-up for production at customers plant is set to May 2008! The FLOWLINE is a fully automated "factory", a robotized production line where many different tempos is made with unmanned or with an absolute minimum of personnel, mainly to monitor the process. The whole process is developed from the phrase "From raw-material to finished product, without any manual handling"

FLOWLINE is designed for a gentle, automated, fast and highly efficient processing and handling of aluminium bars, in the school of "Lean" and "Just in time" production. It's unique flexibility and high capacity makes FLOWLINE world class in production of windows, doors and facades (curtain walls). FLOWLINE is also suitable to produce parts to the automotive and telecom industry.

H-Fönstrets FLOWLINE contains no less than 27 CNC servo axes (system dependent), and is also developed to manufacture two bars at the same time (Single bar production is also possible), all to reach the highest level of productivity, optimizing of material and to save time.

Further, the FLOWLINE includes 2 CNC controlled ink-jet printers for online marking of i.e. serial nr, length etc.

A working centre with four SKF high-speed spindles with Ø 120mm, 42,000rpm and 5,5kW (7,5kW peak) per spindle. Each spindle is individually controlled in X, Y and Z direction by 12 CNC servo axes (In total four units with 3-axes each). This enables simultaneously machining from all four sides. The robust high-speed spindles together with a heavy duty design and frame makes it almost vibration free. This and thanks to the high rpm, it's also "burr-free".

Two unique CNC saws equipped with 3 CNC servo axes each, and a saw blade diameter of 550mm (max 650mm) is taking care of the cuts in FLOWLINE. The two saws are placed mirrored in front of each other, so that the cutting is made at the same time and from the painted side of the bar first, this makes the quality of the visible surface (and corners) of an extremely good quality and burr-free.

A three axes high-speed portal robot takes care of the cut and processed details. The robot puts the profiles two and two, in up to a maximum of four different/individual carts. Pre-programmed sequences ensure a maximum of profile bar optimizing. When the carts are loaded with the programmed amount of details, they are transported to the assembly area. The details are by now sorted after each specific window, making it fast and easy for assembly personnel to find and start assembling. The nr of racks in each cart depends on profile size. Thanks to these solutions, the company will have unmanned production in a number of hours per day.

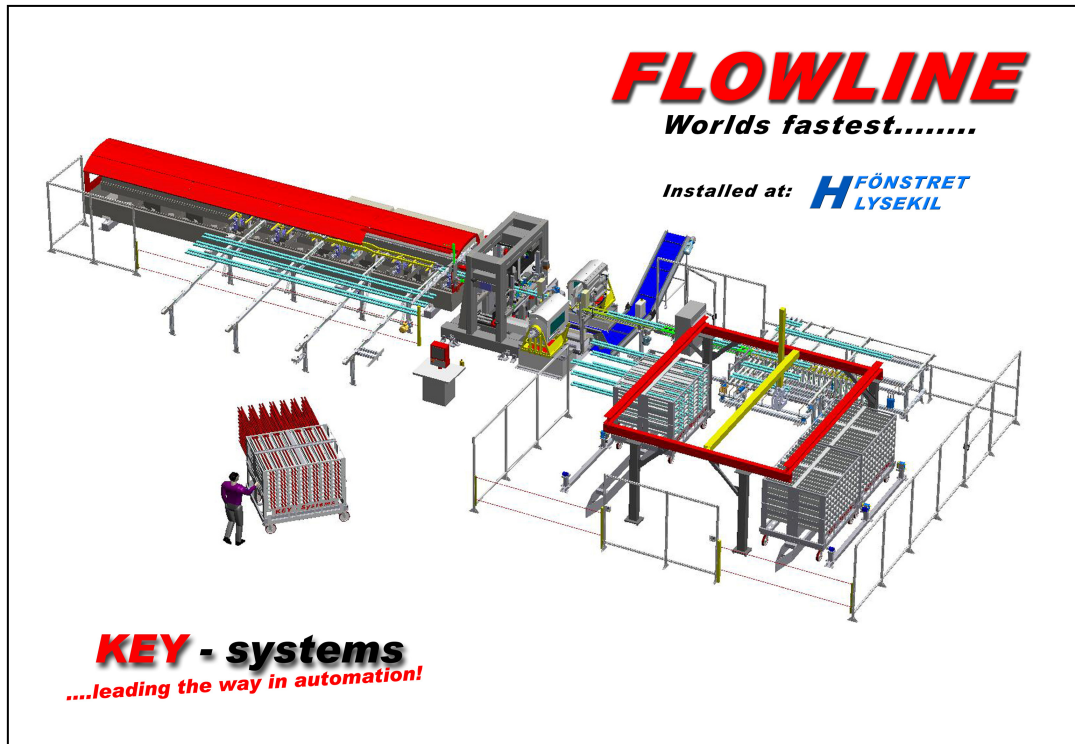
The KEY-systems FLOWLINE is handled by only one operator, where only about 25-35 % of operator time is actually handling the machine. The operator loads profiles into the

machine, takes carts in and out and loads the pre-programmed orders transmitted from the office into the machine PC. The rest of the operator's time can be used to manage a second machine or to work with part assembly on window frames etc.

"This robotized machine that we've bought from KEY-systems AB is probably the world's fastest flexible production line of this type. It's not just a machine, but more like an automated factory plant in it self." This said by Mr. Mats Andersson, President of H-Fönstret in Lysekil.

H-fönstrets investment in FLOWLINE with options will be of a total of approx 9 million Swedish crowns.

Money well spent for the future!



NOTE! FLOWLINE is an upgraded new version of the famous Nikom Speedline, but faster, more precise and with more power.

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