

Lammin Ikkuna Oy – an innovative window factory

Pinomatic Ltd delivered two production lines to Lammin Ikkuna Oy in the summer of 2007. This occasion was the first time Pinomatic supplied equipment to Lammin Ikkuna Oy.

Lammin Ikkuna Oy in Finland manufactures wood and wood/aluminium-construction windows and windowed balcony doors. For manufacturing frames and casements, the company uses pine that they process themselves. The company has 100 employees in Lammi, and an annual turnover of approximately 12 million €. Most of its production is distributed domestically and to nearby regions through leading Finnish construction supply and fabrication companies.

The factory was established in the 1970s. From the very beginning, its operating principle has been to manufacture windows by special order only, from individual windows to longer series.

Lammin Ikkuna Oy has an unbiased and innovative approach to operational development, adopting

new manufacturing techniques and implementing new technological solutions in its products, for example. High product quality is guaranteed by extensive product development and quality control.

Tailor-made windows on a tailor-made line

The Pinomatic deliveries were made at one-month intervals, start-

ing with finishing line mechanisation. The delivery included automatic loading and unloading equipment for the drying carriages, and conveyors enabling pieces to be circulated on the line.

The second delivery included mechanisation equipment and line automation for the casement component machining line. An optimising cross-cutting saw, planing

machines, and window machining centre were acquired for the line. A glued blank at the beginning of the line is automatically lifted onto the cross-cutting saw, and at the end of the line the piece is ready for surface treatment.

"This was our first machining line delivery for a middle-sized window factory. Installation and commissioning was completed at



Production Engineer Kimmo Penttinen and Production Planner Eija Ala-Savikola were two of the participants in operational training for the line.

Pinomatic's products are now also delivered to Lithuania

UAB Singlis and its Managing Director Andrius Zuzevičius have been working with Pinomatic Ltd's equipment since spring 2007. The company imports and sells Pinomatic's products in Lithuania. Some deals have already been made, with delivery deadlines at the end of this year and at the beginning of 2008. The headquarters of UAB Singlis are located in Vilnius.

For more information about Singlis, please visit www.singlis.lt

a rapid pace, and training the new line operators went very smoothly with the customer's highly motivated staff", says Pinomatic's Petri Oravamäki.

The customer is also satisfied with the delivery. "We were looking for a supplier who would be able to take the distinctive aspects of our production into account. Pinomatic had the answers, and we found no deficiencies or cause for complaint at any stage of the delivery", says Hannu Saarinen, Lammin Ikkuna Oy's Production Director.

Pinomatic encourages employees to stay active

Pinomatic Ltd invests in exercise programs to promote employee health. Various exercise campaigns are implemented on a regular basis.

Pinomatic's first investment to help keep employees active was an equipped gym opened in the summer of 2003 for unrestricted use by employees and their families. In autumn 2007, the gym will again be improved by a space expansion and new equipment.

Pinomatic's view is that a suitable amount of exercise boosts energy and improves performance in everyday routines. "As a company, we believe exercise promotes physical and mental performance, decreasing sick leave absences and thus improving the company's oper-



Some of the marathon group going on a run.

rational health as well", says Petri Oravamäki.

Half-marathon, 21.1 km

This spring's campaign was a half-marathon, for which training included running as a group once a week. Mr. Oravamäki, who has run several marathons, was the group leader. No fewer than 15 employees joined in. Employee spouses also had the opportunity to participate, which added welcome reinforcement.

The goal was to run in the Summer Night half-marathon in Forssa, Finland, on 16.6.2007. All participants pulled through admirably, with final times ranging from 1 hour 53 minutes to 2 hours 34 minutes. The ultimate benefits of the campaign will emerge later. If some participants catch the exercise "bug", the investment has been worthwhile.

Automation solutions for production lines

Part 2. Finishing line

We supply two types of finishing lines. First there are the finishing lines for wide pieces, such as furniture components. Another type of finishing line is for narrow pieces such as mouldings, panels and outer wall timber, which are done at high line speeds.

We are now looking into production automation for pieces that are narrow and long. The construction industry increasingly wants products delivered to fabrication sites to be pre-treated, or at least primed. Therefore, planing and saw processing plants have been obtaining more and more extensively automated finishing lines in order to better meet their customers' demands. An efficient line has to have fully operational mechanisation equipment in order to justify the total investment for the production line.

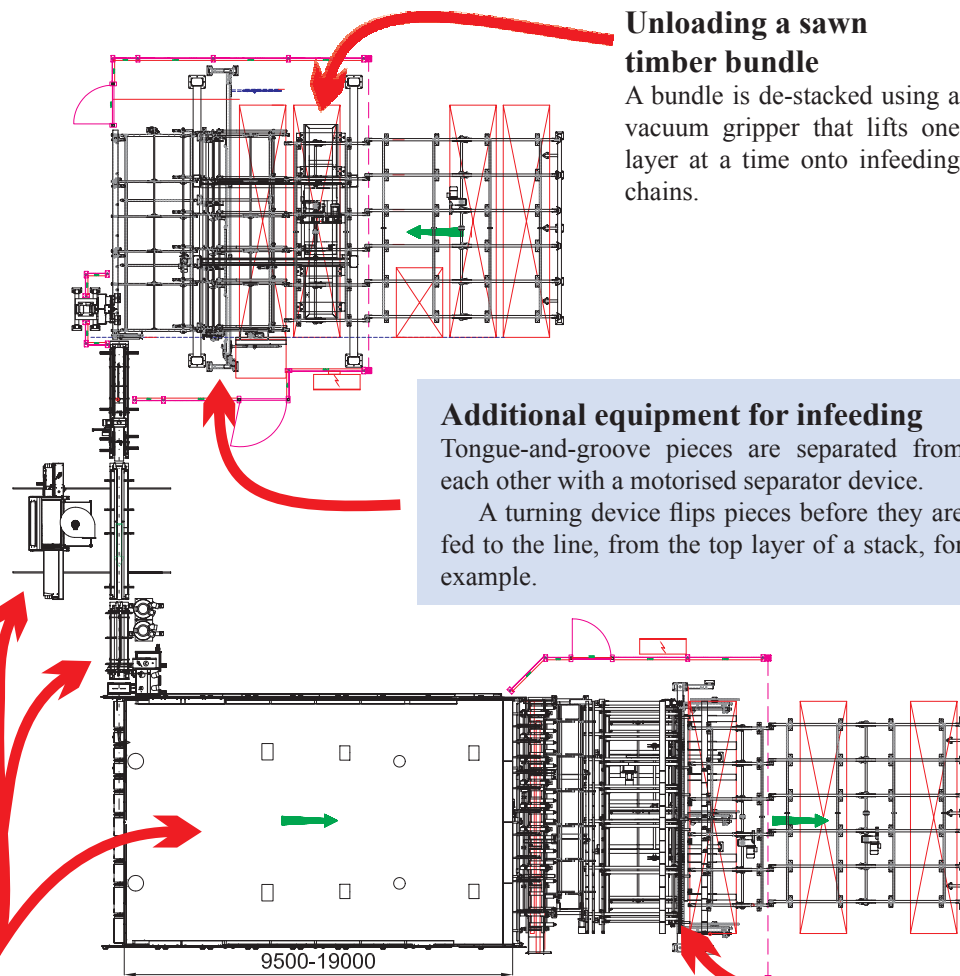
Pinomatic is the biggest line mechanisation supplier in Finland. It began completing installations for customers in 1989. In the largest lines supplied, pieces are surface-treated three times and move more than 230 meters along the production line.

Whether you planning to acquire a new line or modernise one you are already using, it's a good idea to contact us!

Finishing equipment

The lines use a spraying machine or vacuum painter, or both, as shown in the accompanying drawing. The spraying machine can be moved aside when not in use. The space and length requirement for the drying tunnel is determined by drive speed, dimension of pieces, and the substance used for surface treatment.

The surface treatment devices themselves are not part of Pinomatic's production, but if necessary, they can be included in the Pinomatic delivery.



Unloading a sawn timber bundle

A bundle is de-stacked using a vacuum gripper that lifts one layer at a time onto infeding chains.



Additional equipment for infeding

Tongue-and-groove pieces are separated from each other with a motorised separator device.

A turning device flips pieces before they are fed to the line, from the top layer of a stack, for example.



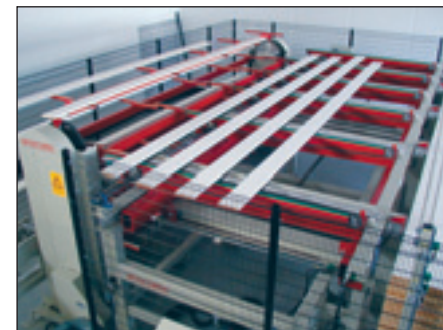
Stacker

A stacker that can be equipped with cross stick cassettes is placed at the end of the line. The same stacker can also be used to stack shrink-wrapped panel bundles.

Sometimes a stacker is installed at the end of a drying tunnel (as shown in the drawing).

Packaging

A shrink-wrapping machine can be connected to the line so that prepared panels and mouldings are automatically bundled for a customer and shrink-wrapped in plastic. In this case, label applicators are available as additional equipment to affix bar code stickers to products and/or a prepared package.



Additional equipment that can be combined with the stacker includes bundle conveyors and wrap dispensers.

Appointments



Simo Viljanmaa started a warehouse job with Pinomatic Ltd on 28.8.2006. He has several years of comparable work experience.



Matti Yli-Peltola has joined Pinomatic as a designer as of 6.8.2007. He is a mechanical engineer by training, and has previously worked as a facilities designer for equipment in the pulp and paper industry.



Markus Rantamäki started working for Pinomatic on 2.4.2007. He is an electrician by training, and his responsibilities include equipment assembly, wiring and installation. Markus has previously worked in maintenance and installation positions.



Sami Malinen has joined Pinomatic as a sales engineer as of 20.8.2007. He works in domestic and international sales. He previously worked for several years selling equipment for the sawmill industry.



Jyri Tynkky started as an electrical automation installer with Pinomatic on 2.5.2007. He has already been with us for summer jobs and job training, and has been working in addition to his studies for a while.



Mats Gustafsson started working for Vanserum Vision AB in the beginning of 2007. Mats has previously worked as an EDI consultant. His background spans from Unix, Linux, Windows and AS400 through data communication and programming. Mats is currently working on updating and refining the Pinomatic Wood Vision system.



Teemu Kujanpää has joined the Pinomatic Ltd installation team as of 22.5.2007. He is a mechanic by training, and has previously worked in various assembly and maintenance jobs.

pinomatic

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