

STRETCHWRAPPING

ALL ABOVE BOARD

Massive plant upgrade puts flooring manufacturer on solid growth course

If getting to the top of the ladder in the North American building products business means not letting the competition walk all over you, then you can't get much better living proof of this truism than **Uniboard Canada Inc.**

Founded in 1982, the Quebec-based company has grown in impressive strides—fueled by a series of bold expansions and acquisitions—to become Canada's largest, and North America's third-largest, manufacturer of laminate flooring for the residential marketplace.

With revenues of over \$600 million last year, the company today operates seven manufacturing facilities to produce a diversified range of high-quality raw particleboard, medium-density fiberboard (MDF), high-density fiberboard (HDF), and thermofused melamine panels and laminate flooring products.

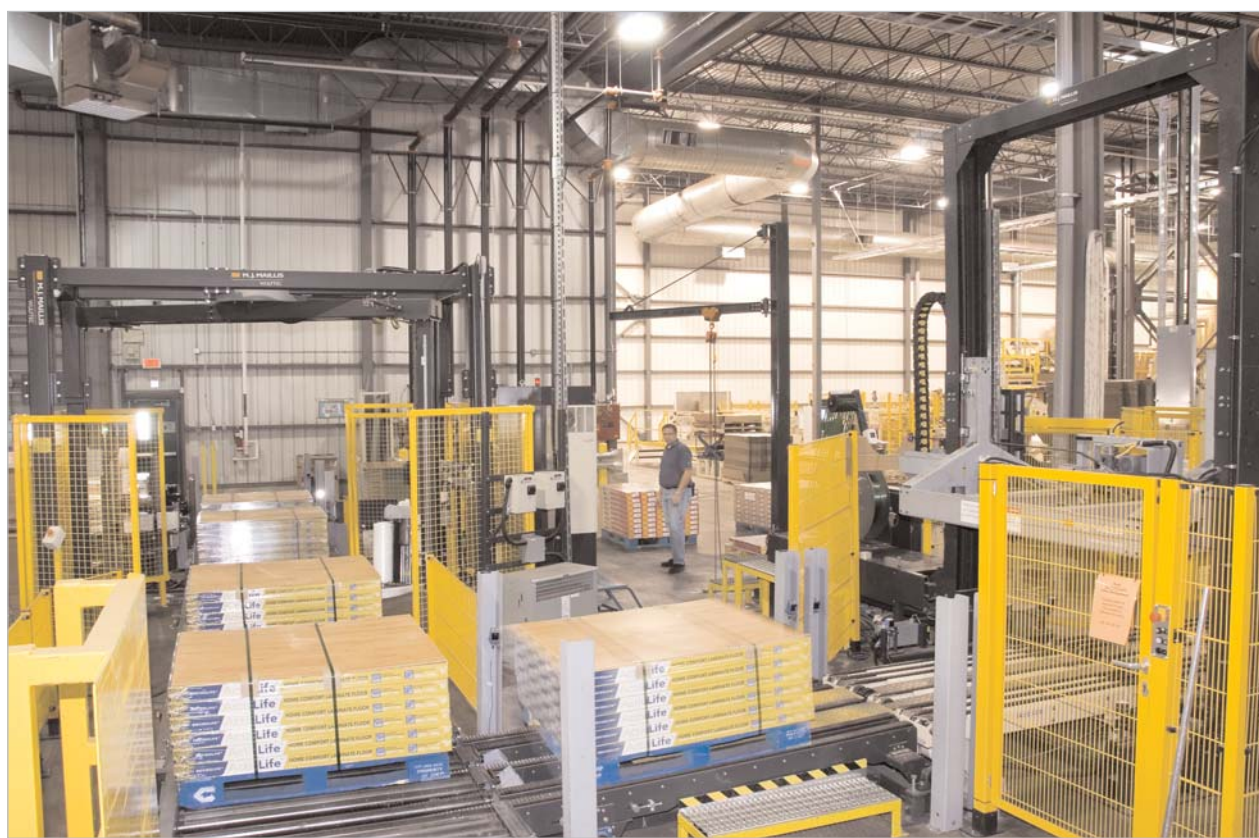
Operated as a wholly-owned subsidiary of **Pfleiderer AG**—a multinational supplier of engineered wood, surface-finished products for residential and commercial building applications—Uniboard employs over 1,300 people at Quebec production sites in Val d'Or, Mount-Laurier, Lac-Des-Iles, Laval, La Baie and Sayabec, as well as its U.S. plant in Fostoria, Ohio.

All told, last year the seven factories turned out a staggering total of 1.4-million cubic meters of composite panels and 80 million square feet of laminate flooring—retailed throughout Canada by the likes of **Costco**, **Home Depot** and **Home Hardware** chains, as well as by **Wal-Mart** and **Sam's Club** in the U.S. and Puerto Rico.

Employing over 200 people, Uniboard's ISO 9000-certified, 240,000-square-foot Laval plant is a model of manufacturing efficiency and environmentally-sensitive manufacturing practices, according to projects and engineering manager Alain Barbe.

"The business has been wonderful for all Uniboard plants, but we are always looking to improve, in both our process and our products," states Barbe.

"Our HDF is made with residual woods only, and



After the strapping bands are applied by the Wulftec Vario Master 9461 compression strapper (right), secured pallets of laminate flooring are conveyed to the WCRT-200 stretchwrapping system, whose dual turntables can turn out up to 50 loads per hour.

it is certified as being an environmentally-preferred product—respecting the norms set by the American National Standard Institute," Barbe states, noting that using residual wood helps save millions of trees from being logged each year.

"Also, the acoustic underlay and glueless locking technology are designed to significantly reduce waste, as there are no additional products required for their installation," notes Barbe, adding that Uniboard was the first company to commercialize a

breakthrough harmonized wood grain-embossing process that matches a textured pattern to the underlying wood-grain design.

RICH LOOK

"The result is a richly-detailed, authentic-looking floor that will make any room come alive," Barbe told *Canadian Packaging* in a recent interview.

"Additionally, these floors come with a unique pre-attached acoustic underlayment that provides superior underfoot comfort, as well as enhanced sound and thermal insulation."

Barbe stresses such product innovation is vital for the company to maintain its edge in the highly competitive flooring busi-

ness, with Canadian producers now having to contend with a flood of low-priced competing products from low cost manufacturers in the U.S., Asia and

Europe.

"But you get what you pay for," Barbe says, stressing the high value-added content of Uniboard's flooring products.

"At Uniboard, we constantly work to find ways to save money in order to stay competitive and succeed," he adds. "For us, a lot of that is achieved via the machinery we use."



Uniboard projects and engineering manager Alain Barbe (left) and Martin Pelletier, Canadian regional sales manager with Wulftec.

By any measure, the manufacture of laminate flooring is a capital-intensive, technologically sophisticated production process requiring a well-tuned, fully-integrated manufacturing operation and continuous, well-executed capital upgrades of plant and machinery.

Just last year, Barbe relates, the Laval plant completed a massive, \$20-million capital upgrade centered around the installation of a second milling line.

The new, highly automated line—installed in part by end-of-line packaging experts at **Wulftec International Inc.** of Ayer's Cliff, Que.—boasts a heavy-duty palletizing robot **KUKA Robotics Corporation**; a Wulftec model **WCRT-200** rotary-arm stretchwrapper; a **Vario Master 9461** strapping machine from Wulftec; a print-and-apply labeling system from **ID Technology Corporation**; and a custom-designed shuttle car-transfer system for moving the palletized loads.

Barbe says he was very pleased with the way Wulftec—a business unit of industrial equipment distributor **M.J. Maillis Group**—integrated the second line's end-of-line packaging equipment, as well as supplying another strapping and a print-and-apply system to the plant's first line.

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A robotic palletizer from KUKA Robotics can stack many different heights and patterns as per client needs.

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“We first began purchasing from Wulftec last year,” relates Barbe, “when they supplied a new strapping machine for our Number One milling line.”

Since then, Wulftec has added print-and-apply systems to both milling lines, as well as installing a fully-automated transport system that runs from the milling lines to the warehousing/shipping area.

“Wulftec’s people really demonstrated tremendous capacity to design and build a system specific to our needs and requirements,” states Barbe.

“Moreover, they challenged us by upgrading our line design to increase the pallet packaging capacity from 40 to 50 loads per hour.”

Installed at the end of each of the two milling lines, the two fully-automatic top-seal *Vario Master 9461* compression strappers feature automatic top-corner dispensers that place 3x6-inch corrugated laminated sheets on top of one another, and then strap them automatically along the top corners with polyester banding, selected over steel banding for product-handling reasons.

“After sampling both methods we found that this strapping has two major advantages for us: better final tension, compared to steel strapping for one, and the fact that polyester is much safer than the steel alternative,” explains Barbe.

Boasting 2,000-pound compression force capacity, both strappers are equipped with a combination under-track pallet void feeder, which automatically routes the strap into the pallet openings when compressing the load, just before starting up the strap tensioning sequence.

“One of these strappers replaced an old unit that lacked the compression strength required, was fitted to using polypropylene (PP) strapping only, and had no void feeders,” notes Wulftec’s regional sales manager Martin Pelletier.

“The second strapper was also a nice and important addition to Uniboard’s new production line.”

Barbe adds that the the new line’s Kuka palletizing robot provides welcome operational versatility of being able to handle different palletizing patterns and load heights to satisfy all of the clients’ shipping requirements, while the *WCRT-200* stretchwrapper has also proven itself to be a worthwhile investment.

Featuring a high-speed automatic rotary arm, a heat-sealing assembly on the out-feed, and dual indexing tables with two parallel lines of accumulation, the *WCRT-200* has been integrated to work in concert with a print-and-apply labeling system to label each palletized load of product during the stretchwrapping operation.

The stretchwrapper operations is controlled by the *S7-300* programmable logic controller (PLC) from **Siemens Canada Limited**, which also supplied all the on-board electronic components incorporated into the machine’s design.

“All our production equipment is controlled via Siemens PLC systems,” points out Barbe. “It’s the standard process control technology for our plant.”

The *WCRT-200* stretchwrapper comes with a built-in load rotator for properly orienting the pallet and accommodating the label positioning in case the customers’ shipping requirements change, according to Pelletier.

“The loads are required to have two labels automatically applied, with one of these being a very large label that needed to be corner-applied—half of a label on each side of the load,” explains Pelletier.



The Simatic Panel touchscreen interface from Siemens facilitates user-friendly operation of the Wulftec end-of-line packaging equipment installed at the Laval plant.



Boasting up to 2,000-pound compression force, the *Vario Master 9461* strapper applies polyester banding to secure palletized loads of laminated flooring board sheets.

“So we supplied Uniboard with two stations, one for each line, that included a special label printer-applicator for the large, seven-by-seventeen-inches labels, as well as a more standard label applicator for applying and centering standard, pre-printed labels on the side of the load.”

SAFE TRANSFER

As for the newly-installed transfer-car system—powered by an overhead power track and traveling along 120 feet of floor-embedded rail tracks—Barbe says he is grateful for having eliminated all the safety risks associated with transporting finished loads to the shipping area by forklift.

“The shuttle car transportation system consists of two eight-foot powered roller conveyor sections that transport a total of four strapped-and-wrapped pallet loads from the milling line, fully managing the transportation over 220 feet of accumulation conveyor lines to our shipping area,” notes Barbe.

According to Barbe, the Laval plant’s end-of-line packaging operations have been performing as well as expected since the plant’s upgrade.

“We continuously monitor for stoppages on the milling line and the pallet packaging area, and very seldom is the packaging equipment a cause for downtime,” states Barbe.

“In fact, when downtime does occur there, it is usually to change the coil of strapping band.”

With all these equipment upgrades in place, Barbe says he is confident that the Laval plant will continue to play a key part in Uniboard’s ongoing marketplace success—fostered by the company’s firm commitment to continuous technological improvement and cutting-edge research-and-development.

“Our customer service is also second to none,” Barbe concludes, “and we are really committed to putting all of our efforts into creating and using technology to deliver innovative products that will give our customers a true competitive edge.”

“And that’s not just something we say: we put our foot down, right onto our laminate flooring, to show that we really mean it.” □



At Uniboard’s Laval plant, a fully-automatic electric transport system, designed and installed by Wulftec, runs newly-manufactured laminate flooring from the two milling lines to the plant’s warehousing/shipping area.

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