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## Sadler conveyors are on the move

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### Supplier News



Petro-Canada's Mississauga lubricants facility.

#### Oakville refinery closing

Petro-Canada is shutting its refinery and cutting 350 jobs in Oakville, Ont., where it produces everything from gasoline and diesel to feedstocks for lubricants. It will also close an asphalt plant in nearby Mississauga. The Mississauga lubricants plant will continue to operate. It would have cost up to \$300 million to bring Oakville up to new specifications for ultra-low sulphur gasoline and diesel. Instead, Petro-Canada will increase output at its larger Montreal refinery. But Oakville's gasoline and oil products storage capacity will be expanded.

### New Machinery



Husky's THX500 magnesium injection plant.

#### THX500 injects magnesium

Betting plastics moulders will expand into magnesium, Husky Injection Moulding Systems Ltd. has developed a thixomolding injection unit. Noting the increasing use of light metal alloys such as magnesium in sectors such as consumer electronics and automotive parts, the Bolton, Ont. machinery manufacturer has designed a magnesium injection unit that can be integrated into a plastics moulder's facility with minimal adjustments. The THX500 runs on the Hylectric machine platform and shares most of the features of a standard injection moulding machine.

### Economic Indicators

#### PT/MC confidence up

Canadian manufacturers of power transmission and motion control (PT/MC) products were feeling more confident in July. They posted a 5.3 on the Power Transmission Distributors Association (PTDA) Confidence Index. That's up from 5.1 on a 10-point scale the previous month. US manufacturers also posted a 5.3, up from 5.2 in June. Year-to-date sales for the Canadians were up 2.5% from the same period in 2002. But sales were down 13% from June and 3.6% from July 2002.





PHOTO: RODNEY C. DAW

# Keeping production rolling

*Sadler conveyors: turning the wheels of industry*

By Ron Richardson

**H**ow many Canadian manufacturers have been in business for 127 years? Mighty few, but one company that does hold that distinction is Montreal-based Sadler Inc.

The privately owned family enterprise has evolved from a maker of leather belting, fire hose and gloves to power transmission equipment; and today it concentrates on custom-engineered, one-of-a-kind conveying systems.

“We provide individual units or completely integrated systems, designed for specific manufacturing, processing or warehousing needs,” says company presi-

dent Steve Sadler.

Sadler engineers and manufactures case, bag, drum and pallet conveyors for both horizontal and vertical applications. Production takes place at its four-story, 5,000-square-metre plant, office and warehouse facility, work centre for about 40 engineers, sales and production staff.

There is also a sales office in Toronto, and in 1995 Sadler opened an office in

Hartford, Conn. to further develop the export market potential of the US, Mexico and Central America. About 75% of the firm’s output serves domestic markets, with the remainder going to export business.

“Our first export order was in 1993 to Sao Paulo, Brazil for an pallet flow rack conveyor system for a distribution centre, followed in 1994 with an order from Mexico for slat conveyor assembly production lines for coolers and refrigerators,” recalls Chris Morin, the sales manager in Toronto.

As well as its full line of pre-engineered conveyor models, Sadler says the company is also geared to “specialize in the unusual or unique conveyor applications, requiring ingenuity and creative problem solving.”

For instance, when giant ExxonMobil Chemical had an ergonomic problem at

Sadler installed one of its larger systems—1,000 feet of conveyoyor—to move packages at Sameday Right-O-Way Couriers in Mississauga, Ont.

its plastic film manufacturing plant in Shawnee, Okla., Sadler Inc. came up with the equipment solution.

The plant’s packaging staff were experiencing muscular stress when bending over to lift film rolls as high as 34 inches and weighing as much as 30 pounds, for loading on forklift pallets.

Brian Parnell, a senior project engineer at the plant, saw the solution as installing a conveyor that would elevate the rolls to a more comfortable packing height.

Serge Levesque, Sadler’s export manager, explains that the company designed a system that automatically moves the very unstable rolls along three 15-foot-long curved belt conveyor sections, starting at a 22-inch elevation and rising to a 34-inch elevation, for a net gain of 12 inches. The rolls don’t fall over and the ergonomic problem has been solved.

The conveyor selection—designed to move a batch every eight minutes at its maximum rate—was based on results of an engineering study and equipment test conducted by Sadler. A video showing the equipment in action was sent to ExxonMobil for its review. Parnell traveled to Montreal for a formal check on the system prior to its shipment to the Shawnee plant for installation last year.

## Film rolling

In the sequence of operations, the film rolling machine winds film over cardboard cores previously placed in the machine by an operator.

When the rolls are complete, the operator uses control push buttons to move a transfer car net to the film-rolling machine.

With transfer car in position, the operator activates machine controls that discharge a batch of rolls (maximum batch length 13.25 feet) onto a 13.5-foot loading conveyor mounted on the existing transfer car. Discharge elevation is 22 inches from the floor to the bottom of the rolls. The operator returns the transfer car to its original position, lined up with the discharge conveyors. The loading conveyor runs and discharges the complete batch of rolls onto the staging conveyor. Each conveyor has a belt travelling in a V-troughed slider bed to increase product stability as it’s conveyed. The conveyor terminals each have a nose bar to facilitate the transfer from one conveyor to the other and side guides to restrain the side rolling of the loads.

After the complete batch has been conveyed onto the staging conveyor, the rolls are inclined up to the 34-inch top of the belt elevation, without falling backwards.

When the operator has finished unloading all of the products off the discharge conveyor, all the rolls that are “waiting” on the storage conveyor are moved onto the discharge conveyor.

A reading of the weight of the full batch is taken and the operator removes one roll from the discharge end of the conveyor. The weight of the removed roll is calculated based on the difference of the total

batch weight and the new remaining weight (without the roll). The discharge conveyor runs and moves another roll to the operator and the cycle steps are repeated until the discharge conveyor is empty.

Sadler Inc.'s association with the Shawnee plant goes back a number of years when it installed its first conveyor system at the facility.

ExxonMobil Chemical recently completed an expansion at its oriented polypropylene film plant in Oklahoma, with the installation of a specialty orienter line giving it an additional 30 million pounds of annual capacity. It has helped the company's film business meet growing demand for white opaque films in the food packaging, labeling and imaging markets. ExxonMobil has four affiliated production plants in North America, including one in Belleville, Ont.

#### Worldwide connections

Advanced computerized design and engineering and preparation of drawings on laser printers and plotters, with electronic transmission of files, puts Sadler Inc. in a position to communicate worldwide with project proposals or for approval checks

before starting production on systems like ExxonMobil's.

"When in doubt about the viability of the intended method of conveying, transferring or rotating, our engineers simulate the actual conditions prior to design to reduce the risk of problems during installation and commissioning of the system," explains Luc Martineau, Sadler's Quebec sales manager.

“We do a lot of soul searching before we have layoffs. We probably make more inventory than we should, but we're in it for the long haul.”

The company's conveyors are designed and manufactured using standard power components readily available from local sources, and this flexibility speeds project delivery at competitive pricing.

The firm also has a wide selection of standard, pre-engineered conveyors, says Sadler. "Why reinvent the wheel if we have already engineered a special convey-

or that will more than meet the needs of a new customer."

The company will undertake turnkey systems for self-contained units, such as vertical reciprocating or continuous conveyors, extendible belt conveyors and special transfer/feed stations for production lines.

"The equipment is usually tested, wired and accepted by the customer in person

at our plant, by live video transmission or by sending a VCR tape or video clip to the customer," explains Levesque. "We will also provide onsite installation supervision and commissioning. Every piece of equipment is different. We are fortunate if some of the components are similar."

Robotics are not a part of the shop floor. But custom-designed CNN pro-

duction machinery, along with lathes, radial drills, cut-off equipment and welding units, are used to turn out rollers, pulleys and other standard components used in volume.

Defining the company's business philosophy, Sadler says: "In every business, it's the employees that make the difference—and our company is no exception. I guess when you look at our history over 127 years and four generations of Sadlers, the only thing that hasn't changed is we still attract key employees who work together with the Sadler family."

Most of Sadler Inc.'s production staff has worked with the company for more than 20 years, and the shop floor remains non-union.

"Sure, there are tradeoffs for all of us. We do a lot of soul searching before we have layoffs. We probably make more inventory than we should, but we're in it for the long haul. So when we have a rush delivery and there's overtime to be done, everyone pitches in."

In describing the plant's production flow, Sadler says: "We try to standardize on certain components, but the overall

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## Putting performance before price

Many production machinery purchases today are based on price alone, rather than the results of equal consideration being given to the effective life and performance of the equipment, asserts Steve Sadler, president of Sadler Inc., the Montreal-based conveyor line manufacturing company. "Price is too often king when it comes to buying decisions by potential customers."

The economic tough times of the past decade have led some companies to downsize or completely eliminate the senior technical and supervisory staff in order to save dollars, says Sadler. "Often, the people let go were the very ones who could and would discuss their requirements with their suppliers and work together to encourage innovation. They bought equipment that had the quality they needed. They bought 'best value' and weren't averse to sticking their necks out and recommending the higher-priced equipment because they had the experience to justify the premium price. Don't get me wrong. Price was important, but so were all the other factors of quality, dependability, suitability, engineering support and availability."

The corporate downsizing to save dollars has led certain companies to hire consultants to advise them on equipment buying decisions.

"The assumption by the client customer that a consultant can do the same job as their ex-engineering department is totally unrealistic," says Sadler. "Consultants are generalists and know next to nothing about the equipment builder's product or their client's technical processes and know-how. To be absolutely fair, how could they be expected to know? So, when it came time to select the equipment manufacturer, the consultant used the same criteria by which they were selected—price!"

Sadler adds: "Many capital equipment budgets are totally isolated from maintenance or operations budgets. What appears as a good capital investment on equipment—meaning the cheapest price—once the maintenance or operational costs are added in, turns out after a few years to be a very poor investment. However, with the high turnover of managers, many

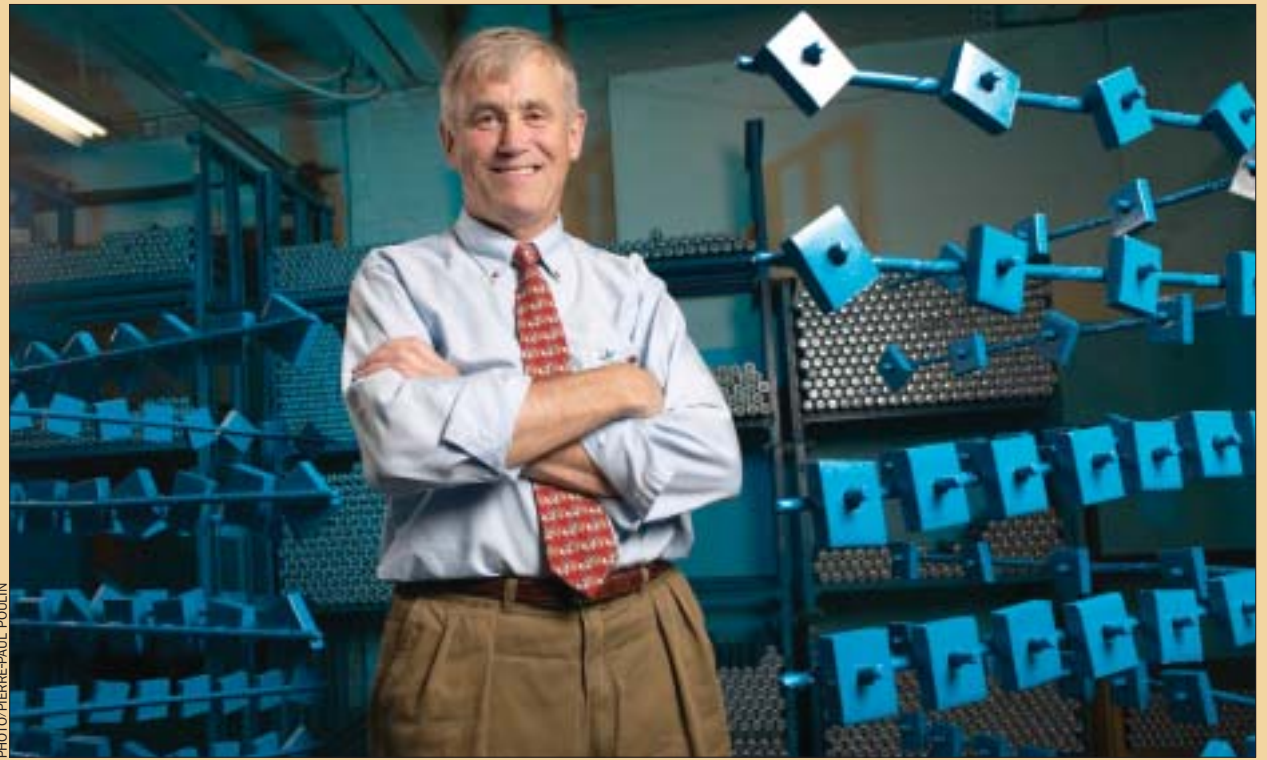


PHOTO: PIERRE-PAUL POUJIN

"Price is too often king when it comes to buying decisions by potential customers," says Steve Sadler, president of Sadler Inc., the Montreal-based conveyor line manufacturing company. He's standing amidst "B-nuts" hanging on an "inverted Christmas tree rack" which is suspended from an overhead conveyor. They have just left the spray paint area and are drying. Conveyor rollers are in the background.

are not around long enough to benefit or suffer from the results of good or poor return-on-investment."

So what does the equipment vendor have to do to survive in the "new economy?" Sadler lists the options:

- Reduce the engineering overhead in the equipment price by curtailing research and development in new equipment design and application.
- Reduce the number of design seminars offered and redirect design efforts to save money at the cost of everything else.
- Stop using exclusively professional engineering sales representatives and use less technical and more commercially competent sales personnel.

- Quote the minimum cost or price.
- Don't ask too many questions unless it will benefit both the customer and supplier, especially when a consultant is conducting a "bidders meeting."
- Don't provide more information than requested, because it may be passed on to the competition via the consultant who wants all the vendors to bid "apples for apples."

Sadler says potential customers who are really interested in quality and performance before price, "attract equipment manufacturers that have developed product innovations and are looking for customers to try out their new ideas. And, in the long term, this will give both parties an advantage over their competitors."



PHOTO/PIERRE-PAUL POLLIN

(L-R) Luc Martineau, Sadler's Quebec sales manager, joins president Steve Sadler and engineer Eric Allard. Allard says an almost 100% digital interface with customers makes the actual printing of a drawing a rare event.

## Engineering conveyor solutions

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assembly varies for each job. So the thrust is retaining those employees who can read drawings and visualize the concept of the machines before fabrication commences. The shop floor employees are mandated or empowered to be accountable for their own work quality. There is considerable dialogue between engineering and production [staff] on the shop floor throughout the entire assembly process."

### Custom estimating

There are no weekly production meetings at Sadler Inc. This is because each department has ready access to the others, problems or questions that arise are answered or handled on a day-to-day basis.

Asked for his definition of lean manufacturing, Sadler puts it this way: "Lean manufacturing to us means lean estimating, engineering and design and job costing. These are the areas of repetitive actions where an improvement in processes can save dollars and frustration."

Engineer Eric Allard adds: "In the mid-90s, we developed a custom estimating and proposal preparation program, which we called FEEPS—for front end estimating and proposal system. We integrated it with our Unix-based job cost and accounting system. This, together with a CAD system, allowed us to evolve to the degree of an almost 100% digital interface with our customers. Today, it's rare that we print a drawing, except for our

shop to use as an assist in assembly."

However, Sadler says for some potential customers lean manufacturing is defined as getting the lowest job quote and this price-versus-quality conflict "has had an enormous impact on the custom machine builder's approach to doing business."

Asked about future company growth, Sadler says: "It's extremely difficult to forecast business down the road when 80% of your customers haven't bought from you in the last three to five years. We have found that industry groups go through periods of expansion at different times. For example, we may be extremely busy with the corrugated paper industry, followed by the automotive or pharmaceutical industries, then this expansion surge in a sector may not occur again for five years."

In the computer world of company-created web sites, Sadler has found this electronic business-to-business route to be "extremely useful," both for domestic and export sales. And it's a great way to show prospective customers materials handling solutions.

Indeed, it's all part of the company's evolution from leather tanning, belting and fire hoses—and several name changes—to state-of-the-art conveying systems. And after 127 years, it's evident Sadler Inc. is in this for the long haul.

*Ron Richardson is a Toronto-based freelance business writer and a former editor of Plant, Canada's Industry Newspaper.*

## Sadler timeline

- 1876:** Company began as L.J. Campbell & Co., a manufacturer of leather belting and fire hose.
- 1881:** Firm purchased by Barry, Smith & Co. and sold to two employees—Robin & Sadler.
- 1884:** Company acquired by George Walter Sadler.
- 1895:** Four-storey plant built in Montreal at Sadler's present address, 1845 William St. Part ownership purchased in The Dunn Brothers Tannery of Stanbridge East in Quebec's Eastern Townships. In the early 1900s, G.F. Haworth Co., a belting manufacturer in Toronto, was purchased and the name changed to Sadler & Haworth.
- 1924:** Sadler recognized as one of the largest leather belting manufacturers in Canada. G.W. Sadler became the sole owner of the tannery and both manufacturing plants.
- 1926:** G.W. Sadler Co. incorporated as G.W. Sadler Belting Co. Ltd.
- 1932:** G.W. Sadler died. His grand-nephew A.C. Sadler became president.
- 1936:** Company name changed to G.W. Sadler Co. Ltd. to reflect a wider range of manufacturing, including gloves.
- 1930 and 1940s:** J.L. Goodhue & Co., W. Linton Belting Co. Ltd., Industrial Leather Products Ltd. and Mechanical Leather Products Co. acquired. Offices opened in Hamilton and Windsor, Ont. The post war years saw the rapid development of unit drives and increased mechanization. Sales of leather belting, gloves and leather specialties decreased.
- 1947:** J.L. Goodhue & Co. became the parent company as part of a reorganization to expand into power transmission, conveyors and materials handling equipment. By the late 1950s these accounted for 80% of sales.
- 1955:** Manufacture of conveyors began in the Montreal plant. By 1957 a Winnipeg office was opened, but it was closed in the early 1960s because of the economic slowdown. The Hamilton office was consolidated with the Toronto office.
- 1959:** J.L. Goodhue & Co. name was changed to Sadler Conveyor & Equipment Ltd. which was more in keeping with the product lines. Conveyor sales were 25%, power transmission 70% and leather belting 5 per cent.
- 1967:** A.C. Sadler retired. The two older sons and great grand-nephews of the founder took over the management. Steve Sadler, president and marketing manager, and Neil Sadler, vice-president, operations, began implementing plans for expansion.
- 1968:** The 73 year-old plant was renovated and additional manufacturing space was added with new overhead traveling bridge cranes, production equipment and tooling.
- 1970:** Two divisions were created—Sadler Conveyor Systems & Sadler Power Transmission. Steve Sadler relocated to Toronto office to boost market position. Neil Sadler remained in charge of the Montreal operation.
- 1972:** Steve returned to Montreal. During the 1970s Sadler concentrated on specialized conveyor systems.
- 1976:** Centennial year. Name changed to Sadler Ltd/Ltee in keeping with the bilingual nature of Canada. Purchased two acres of land adjacent to the Toronto airport for the site of a future facility.
- 1980:** Capacity increased again with the addition of a new building and overhead traveling bridge cranes to house the raw material and shipping/receiving operations. Name changed to Sadler Inc. With the economic slowdown of early 1980s, plans for manufacturing facility in Toronto were deferred and land was sold.
- 1990:** An economic slowdown and severe world recession.
- 1995:** Established a sales office in Hartford, Conn. Began expansion in US, Mexico and Central America.
- 1998:** The realization of two years of development of Solutions Photo Database of conveyor systems and special conveying equipment. Sadler web site went on line as [www.sadler-conveyor.com](http://www.sadler-conveyor.com).
- 2001:** Celebrated 125th year.

Source: Sadler Inc.