



Orbus Pharma's headquarters and main manufacturing facility in Markham, Ont.

PICTURES OF HEALTH

Ontario generic drugs manufacturer raises its quality assurance competence to the next level with home-made metal detection technology

An apple a day to keep the doctor away is a wonderful children's fantasy, but the truth is that for many people, a trip to the nearby drugstore or pharmacy for a handful of over-the-counter (OTC) medicines to get over their minor ailments is almost as routine as buying groceries.

And it's up to companies like **Orbus Pharma Inc.**, Markham, Ont.-based manufacturer of generic oral-dose pharmaceuticals of Markham, Ont.—to make sure that the right remedy is always close-at-hand on the shelf in the moment of need.



Stephen Brunck, production administrator (left) and Thomas Larocque stand in front of a 75-cubic foot custom-made V-blender.

Founded in 2000, the publicly-traded company specializes in the development and contract manufacturing of generic tablets and other orally-ingested dosages of medicines and vitamin formulations used to battle everything from cold-and-flu symptoms and constipation to the more serious cardiovascular and urologic disorders, insomnia and osteoarthritis.

"The company actively targets brand-name products where there is no expected patent infringement to develop generic versions, and also uses inhouse-developed proprietary delivery systems for certain products," explains Orbus purchasing manager Thomas Larocque.

"Orbus will then license these developed generic versions to third-party companies, who will market and distribute them in their respective markets under their own name."

Four years ago, Larocque played an instrumental role in the company's move from Brampton, Ont., to a new state-of-the-art, 21,000-square-foot Markham facility housing its head office, a fully-equipped R&D (research-and-development) laboratory, and a manufacturing operation capable of turning out more than 600 million tablets and over 100 million capsules per year—employing a total of 36 people.

Orbus also operates a smaller 10,000-square-foot, four-employee plant in Cambridge, Ont., specializing in antibiotics, Larocque relates, with both sites boasting fully-updated *GMP (Good Manufacturing Practices)* certifications.

"Along with the greater capacity for future growth, we spent well over \$2 million to create an environmental system that will help ensure the quality of our products," Larocque told *Canadian Packaging* on a recent visit to the Markham location, where strict adherence to the most stringent rules on cleanliness imaginable is the daily norm.

"In any pharmaceutical manufacturing setting, the

avoidance of cross-contamination of drugs and ensuring ingredient purity is of paramount importance," Larocque expands.

"To ensure that particles of a drug ingredient don't fly out of a room when a door is open, the air system inhales, if you will, keeping particles within the room," notes Larocque, adding that such religious quality assurance applies in equal measure to both the OTC drugs and the herbal-based nutraceutical products it co-packs for others—such as the fast-growing **Ddrops** vitamin supplement from **The Ddrops Company Inc.** of Toronto.

Marketed as the "sunshine vitamin in a drop," the liquid Vitamin D3 supplement was developed specifically for people living in places that do not get sufficient natural sunlight to ensure naturally-maintained bone strength, with new breast-feeding mothers and seniors considered the biggest risk groups.

"I'd say that by now we have produced about 100,000 milliliters of Ddrops since we began producing it in 2006," says Larocque. "It's a hot new product and we're very pleased with the market response to it."

While contract manufacturing and co-packing currently accounts for about 70 per cent of the company's business, Larocque says that Orbus does a lot of involved research work aimed at producing new-generation anti-platelet, anti-herpes, and anti-hyper cholesterol remedies in tablet form.

Keeping its brand-name manufacturing clients happy requires Orbus not only to source all the proper ingredients on their behalf, according to Larocque, but also to use top-notch pharmaceutical production and quality assurance equipment in the manufacturing process.

To that end, the Markham plant significantly boosted its QC (quality control) capabilities a couple of months ago with the purchase of a **Phantom** series metal detector manufactured by the Toronto-based **Fortress Technology Inc.**, and distributed by **Charles Downer & Co. Ltd.** of Richmond Hill, Ont.

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A Phantom pharmaceutical metal detector manufactured by Fortress Technology plays an integral part in Orbus Pharma's quality assurance.



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According to Larocque, the *Phantom* pharmaceutical metal detector now plays a key role in meeting the high quality assurance standards demanded from pharma pro-



A ¼-horsepower Baldor Electric motor powers a Speck-Tech Systems conveyance line in one of Orbus Pharma's packaging rooms.

ducers like Orbus by the likes of **Health Canada** and its U.S. counterpart the **FDA (Food and Drug Administration)**, with the ability to detect and reject the tiniest of metal contaminants (0.15-mm for ferrous and non-ferrous metals, and 0.3-mm for stainless steel) at extremely high throughput speeds of up to 30,000 tablets per hour.

"We only want the best equipment available," explains Larocque. "There's no use going half-cocked when it comes to purchasing a decent metal detector—especially when company reputations and consumer use are involved."

Powered by the most advanced digital signal processing technology available and built with a rugged mirrored stainless-steel exterior, all of the *Phantom's* contact parts are designed for easy removal for cleaning without any tools—thus further negating the risk of any cross-contamination taking place during manufacture.

"For us, it's another important safety device that we rely on," states Larocque. "We want to ensure that everything manufactured here is safe for the consumer, and although it is only a recent addition to our packaging line, we are very happy with how the *Phantom* is performing.

"It is an extremely reliable and user-friendly system."

The *Phantom* metal detector joins a lengthy list of other top-of-the-line pharmaceutical production and packaging equipment installed at the Markham plant, including:

- Four custom-designed and custom-built V-blenders, ranging from 1.5 to 75 cubic feet in volume capacity;
- Four rotary tablet machines, including model **Rimek KED-4** from **Karnavati Engineering**; model **CMD B-16** from **Cadmach Machinery**; one model from the **Jiangnan Packaging Machinery**; and one custom-fabricated machine;
- Model **Super Seal 75** induction sealer from **Enercon Industries Corp.**;
- Pharmaceutical-grade conveyance line from **Speck-Tech Systems Inc.**, powered by a ¼-HP (horsepower) industrial motor from the **Balder Electric Company**;
- Model **92600** automatic cap tightener from **DT Kalish, Inc.**
- Model **STS-L8000A** high-speed labeler from **Speck-Tech**;



Ddrops, a Vitamin D3 supplement, is one of the many successful nutraceuticals produced by Orbus.

- A model **Sure Mark 6100** printer from **Graphic Controls LLC** for applying lot and date codes to the finished packages.

Being creatively involved in the highly competitive drug development industry, Orbus naturally takes pride in providing high-quality products and services tailored to clients all over the world, according to Larocque, which is reflected in the way it approaches its capital investment decisions.

"You can't have great hockey players playing with lousy equipment," he asserts. "We know that while we have the best people working to create the best pharmaceuticals possible, we also have to have the best equipment, too.

"Having the best of both worlds in place is what makes Orbus a growing company on the move." ♦

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