
Fen-Tech Industries owner Derrick Feener strikes a cheerful pose in front of the Genesis series courier bagmaking machine incorporating a Robatech glue melting system mounted on top of the machine, assembled at Fen-Tech's production facility in Burlington,Ont.

# A BONDING EXPERIENCE

Courier bagmaking machinery manufacturer optimizes equipment performance with advanced adhesive melters

***By Andrew Snook***
***Photos by Naomi Hiltz***

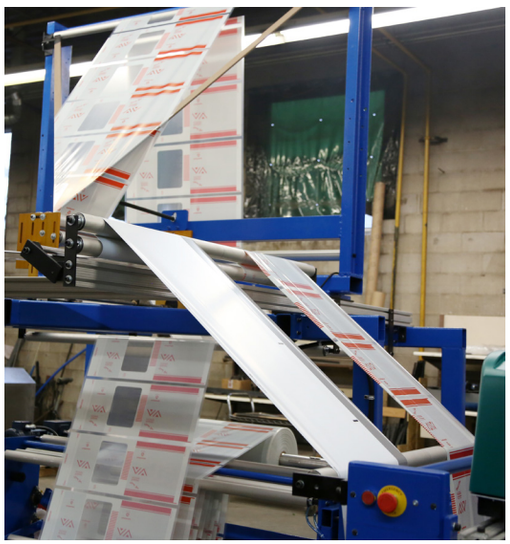
When it comes to the manufacturing of courier bags, your adhesives better be effective. After all, that strip of glue where you seal a courier pouch is the key line of defence for ensuring important documents and parcels arrive at their destinations undamaged.

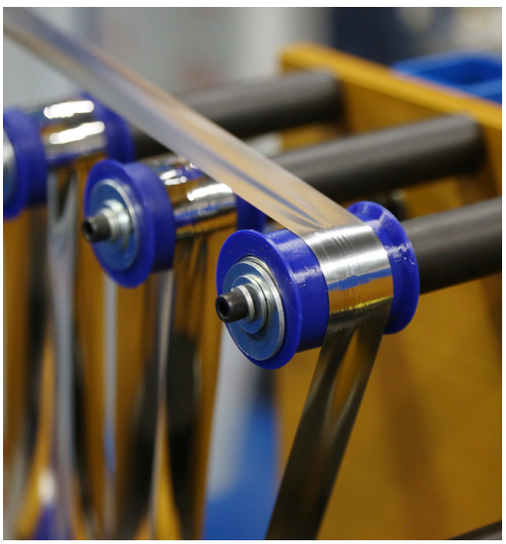
When **Fen-Tech Industries Corp.** decided to shop around for a new adhesive application melting system to attach to its new 56-inch wide, split-lane machine designed for the manufacturing of courier bags, the owner turned to Robatech Canada, Vaughan, Ont.-headquartered subsidiary of Swiss-based adhesive applicating machinery specialists Robatech Group.

"We use a Robatech glue system to dispense the glue onto the release liners," explains Fen-Tech Industries owner Derrick Feener.

"We've been using Robatech for a long time now," Feener states. "It's a very good product."

As Feener explains, Fen-Tech Indus-




**Clockwise from top left: Fen-Tech 56-inch-wide split-lane bag machine; dual photoeye electric sensors guiding the split operation; bag material unwinding on the Genesis machine; unwinding liner material; side view of the custom-built Genesis machine.**

tries is a design-build company specializing in servo technologies for the manufacturing of equipment for the plastics industry.

Based in Burlington, Ont., the family-owned and operated company has more than 50 years of combined industry experience to draw on, which it leverages to cutom-build many high-performance machines per year for high-speed production of bags for virtually any industry.

"You want to make garbage bags, there's a machine for that. You want to make bread bags, there's a machine for that.

"Your bag needs a zipper, we make the fastest zipper attachment on the market

" You want e-commerce bags like the courier bags, there's a machine for that," Feener says.

"Each one has a four-week build time," Feener notes, "but when we get a very complex machine, it's an eight-week build time."

Feener's latest purchase was for four Robatech melter systems: one for his current order heading to a customer in California, and three more to fill future orders.

According to Feener, the ***Concept*** series melter system from the Switzerland-based company provide a great fit for his company's equipment.

"Robatech goes through a lot of trouble to make sure it's done right, [so that] the glue does its job and everything is wired correctly," Feener says, adding that the equipment being electrically sound and properly certified is a big part of the appeal of the Robatech melters.

"Robatech components are CSA (Canadian Standards Association)-certified, so we are able to help them with meeting those regulations," says Roger Kehoe, chief executive officer of Robatech Canada.

Kehoe says his company was able to provide the kind of high-quality adhesive system that Fen-Tech Industries was searching for, after having a less positive experience with another supplier.

"Fen-Tech needed to have a unit that provided them with proper adhesive monitoring," Kehoe explains.

"They coat poly-substrates, and they need to ensure they have an accurate coating weight, as well as an accurate start-and-stop.

"The Robatech system can monitor that adhesive component," he says.

"A key to the process of making these courier bags is the glue" adds Feener.

"If that glue is not laid down correctly, the bags being produced will not be usable."

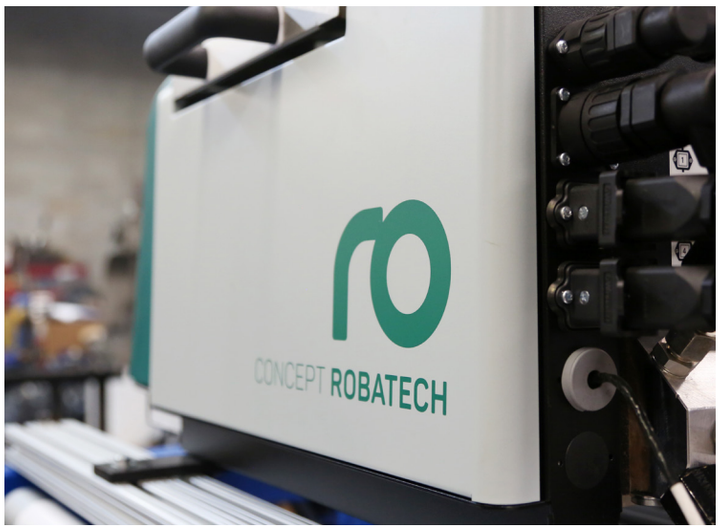
Kehoe says Fen-Tech was also looking for ways to achieve greater reliability for its adhesive applicating systems.

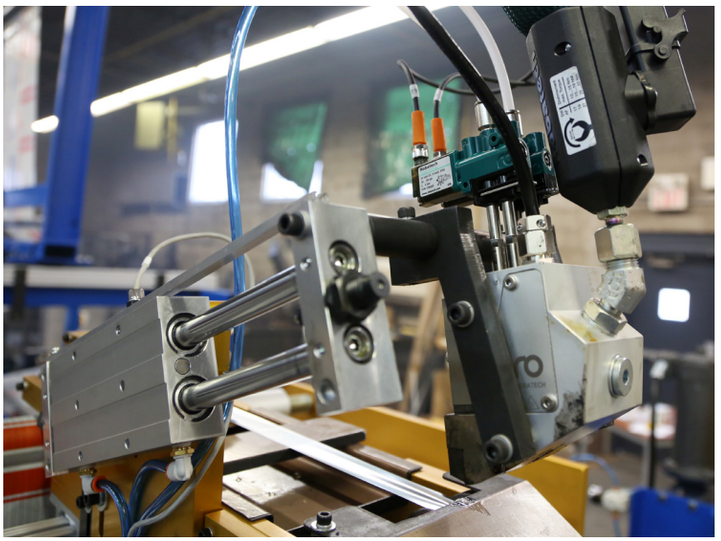
"They wanted to upgrade to better-quality components, longer-lasting components," he says.

"Robatech is a company that focuses on sustainability, which means we're manufacturing components that have a long life-span that can be backwards-compatible for upgrades in the future, and that will reduce the amount of waste due to improper gluing," Kehoe states.

After loading the glue into the Robatech melter, it is heated up and pumped at high pressures via two pumps over to the actuators.

"The actuators sit on top the of glue head," Feener explains. "Robatech has



**Clockwise from top left**
**Robatech Concept series melter; filling up the Robatech Concept adhesive tank; Robatech liner guides and cooling section; Roabtech glue-dispensing heads; Robatech touchscreen HMI (human-machine interface) control panel.**

designed a special manifold block for us, and the manifold itself is two-inches-wide, so it can spray up to two-inches-wide of glue.

"The glue head will then come into position and begin applying glue to the liners," Feener explains.

The Robatech system uses a high-precision encoder to ensure the glue is consistent and is measured appropriately.

"It sends a signal back to the Robatech system that tells the pump how fast to run, how much glue to lay down on the material, when the gating should begin, when it should stop … it's a very intricate part of the system," Feener relates.

"The encoder then sends that signal to the gear pump, which is controlling the amount of pressure that pumps into the hose," he points out.

"They do a great job at making sure the right amount of glue is being laid down at the appropriate time."

One of the key features that Feener especially likes about the Robatech system is its gating technology.

"We're actually starting and stopping the spray of the glue [because] Robatech does a fantastic job at this," Feener says.

"The lanes of the glue are spread onto the liner, dispersed at the correct quantities—meaning the exact amount of width and the exact height.

"Once the glue is adhered to the release liner, we then apply the release liner directly to the web," Feener says.

"To make sure the heated glue doesn't come into contact with the film, we apply it to the liner, which has a release coating on it capable of withstanding the heat, and then we cool the glue and apply it."

According to Robatech, the ***Concept*** series melters are designed to ensure efficient energy consumption and maintenance, whereby all *Concept* series melters are insulated to reduce heat loss.

The tank is coated with special non-sticking FEP (perfluoroethylene propylene) material for optimal ease of cleaning, while the individual temperature control helps to prevents adhesive burning.

In addition, filters on tank and pump outlet minimize ingress of possible contaminations through the heated hose into the application head, where they could cause nozzle blockage.

In addition, the *Concept* series melters

**Verifying quality and efficacy of glue application on plastic courier bags produced on the Genesis machine equipped with Robatech melter.**

## *"You want to make e-commerce bags like courier bags, there's a machine for that."*

are designed for intuitive and safe operation based on a language-independent control panel or, in this case, the ***RobaVis*** touchscreen user interface, featuring an adjustable main screen and visualized presentation enables intuitive, easy operation.

The current operating state is always indicated and saved in an event log, according to Robatech, while using the additional ***InfoPlus*** software on the touchscreen allows for the collection and analysis of all the key operational data, which can be used for scheduling preventive maintenance and to indicate possible opportunities for further process improvement.

Feener says he really appreciates the *Concept* series melters' many user-friendly features that make it easy for the operators to use.

"The user interface touchscreens jumping back and forth is very intuitive," Feener states.

"It's very easy to understand," Feener says, "[and] it can easily be navigated by the end user in terms of the control interface or the HMI (human-machine interface) panel."

Adds Kehoe: "Robatech was able to offer Fen-Tech the widest range of possibilities for equipment integration into their equipment, whether it be control via Wi-Fi, Ethernet cable or Bus."

As Kehoe points out, the digital touchscreen on Robatech products provides intuitive and easy navigation for their operators, making it easier to diagnose problems in the field.

Fen-Tech Industries service technician Janahen Manoharan agrees.

"We can control the temperature of the glue tank, the hoses and the glue heads," he says.

"We can also adjust the pattern the operators want to control.

"All you have to do is go to whatever head you want to use," Manoharan notes, "and just type in what the glue letdown would be."

The entire process, from initially meeting with Fen-Tech to the installation and commissioning of the Robatech system, was fairly straightforward, according to Kehoe.

"It was probably about 10 weeks in total from start to finish," Kehoe says.

"We needed to go on-site, understand their processes and what parameters they were operating under to ensure we supplied the correct melting rate and pumping rate that they needed," Kehoe relates.

"We needed to measure the quantity of adhesive that they were laying down on their polybags, and then we needed to test—to install a trial system on their equipment, train their operators, perform a quality control test, and show them what we were able to do."

Feener says that Robatech has been fantastic to work with through the entire collaborative process.

"If we need service, they come out and address it right away," he says.

"It's very important to Fen-Tech that we're matching equipment that we're supplying with the same integrity and strength that we put behind our equipment," Feener concludes, "and that's what I want from my suppliers as well.

"Robatech fully delivers on that."

**SUPPLIERS**
Fen-Tech Industries Corp.
Robatech Canada

**Please see a video of the Robatech adhesive melters and Fen-Tech bagmaking machinery in acion on Canadian Packaging TV at www.canadianpackaging.com**