

Automated deburring machine opens up opportunities for larger part runs at L.J. Custom

Broad spectrum of equipment keeps this B.C. shop nimble for varied customer base

By Robert Colman

Reducing man-hours on any job can make the difference between landing a contract and losing out to a competitor properly geared for the parts in question. Surrey, B.C.-based L.J. Custom Sheet Metal understands this only too well, which is why, over its 32-year existence, the fabricating company has made critical upgrades to match the demands of its clients. Most recently

this has included a new deburring machine, a new press brake, and a folding machine.

History

L.J. Custom was founded by husband and wife team Larry and Joan Oster. Originally the shop specialized in serving the ductwork and ventilation equipment market, but it has since become a go-to shop for a variety of jobs for a broad swath of industries, including HVAC, logging, and fire-



Lisa Oster in front of the shop's Amada Aries 245, which is situated right next to the new Apex deburring machine for the rapid processing of parts.

place construction. When *Canadian Fabricating & Welding* visited the shop, L.J. Custom was working on wall brackets, louvres for ventilation on buildings, and fireplace parts, to name just a few.

“We stand out through the variety of jobs we can handle,” said General Manager John Mattern. Mattern started with the shop 25 years ago as a welder. “We have plasma cutters, CNC punch presses, press brakes, plate rolling and roll forming capabilities, and shears. Although we are not a large shop, we can handle big jobs. With our welding talent, we can also handle assembly work.”

The team of 16 in the L.J. shop includes three welders. They work in mild steel, galvanized, stainless, and aluminum in sheet thicknesses from 30 gauge to ½-inch-thick plate.

The owners have always believed in making strategic machinery investments that fit the shop's niche market. For instance, L.J. Custom

Punch Press, Deburring Combo Benefits

It's the shop's CNC punch presses that probably add the most production capacity in comparison to man-hours employed. Its Amada Vipros Z358 turret punch press is equipped with a sheet loader, which allows for lights-out production. L.J. Custom has devised a camera system that



John Mattern with parts ready to run through the Apex 1975M-DM deburring machine.

allows the team to check on the machine after hours using mobile devices.

“Even before we had the camera system, we had this running all night,” noted Mattern. “However, someone would have to come in periodically to check that there were no concerns.”



L.J. Custom's Amada Vipros Z358 with sheet loader, runs lights-out nights and weekends when needed.



Bending a perforated profile on the Tennsmith CNC folder.



The new Accurpress Advantage press brake and a part processed on the machine.

A second CNC punch press, the Amada Aries 245, is used primarily for rush jobs. However, the new Apex deburring machine the shop has purchased from distributor Empire Machinery & Tools Ltd. is making production work on that table more appealing. A 19-in. Apex 1975M-DM model was installed right next to the punch press on the shop floor. This deburring machine is a two-station model, meaning the first process the material goes through is a 19- by 75-in. abrasive belt sanding head, followed by a 20-in.-diameter Scotch-Brite™ pad running in dry operation. Each station has its own dust hood positioned to collect debris in a wet dust collector.

The conveyor feed speed can be adjusted from 5 to 25 ft. per minute. The first sanding head is powered by a 20-HP motor and the second by a 5-HP motor. The height for each sanding head can be adjusted independently. The thickness setting for the conveyor is motor-driven and comes with a digital programmable keypad. Up to 10 thickness presets can be stored in the system.

"We bid on a job that we had done before; however, the number of parts to be produced is about four times what we did the last time we got this contract," said Mattern. "The part requires burrs to be removed. It will be a lot of small parts. By investing in a deburring

machine, we'll likely halve the time we spend on the job."

The deburring machine, on the floor since February, has already saved time on a number of short runs, but it will be in larger job runs of small parts that the benefits of the investment will really become apparent. On fiddly small parts, automating the deburring process just makes sense, said Mattern.

Long production runs are nothing new to L.J. Custom. Mattern said their jobs range from 100 to 10,000 parts at a time. Keeping his team working on production rather than finishing frees up time for value-added applications.

Press Brake Options

Although the shop has a 14-ft., 250-ton press brake, six months ago it invested in a much smaller Accurpress Advantage press brake (an 8-ft., 100-ton machine). With its small footprint, Mattern said, the new brake makes sense for many of the smaller parts the shop is producing,



One example of the many louvre models L.J. Custom has become known for.

saving both time and money.

"Accurpress is right in town [in Surrey] and they make the presses right here, which is why we bought them," said Mattern. "We have no concerns if we need service."

The other recent investment the company has made is a Tennsmith CNC folder. The folder is ideal for long panel work for which the setup time on a press brake would be unnecessarily complicated. The speed of the operation on repetitive, large parts was on display during CF&W's visit, at which time one of the team members was bending a perforated profile.

It's obvious L.J. Custom is still very much a family business. The Osters' daughter, Lisa, is a key contributor on the shop floor. And management encourages the team to continually upgrade their skills through courses outside the shop and training within. That comes back to the shop's goal, which is to be the go-to local supplier for whatever its customers can dream up. **FW**

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Other products that were in production during Canadian Fabricating & Welding's visit to L.J. Custom.