

# Customer Success Story: Heavy Industrial Products



## Falcon Streamlines Equipment and Support with ESAB Warrior/RobustFeed Pro System.

- Consistent product line for ease of training, parts and support
- Increase portability and flexibility of welding line
- Improve weld quality
- Automate cutting to increase productivity

### Situation

Located in Toronto, Canada, Falcon Machining & Fabrication is a leader in the manufacturing of high-quality products for the hydro power, automotive, custom machinery, mining and construction industries. Falcon specializes in large, leak-free, closed transformer shells and the fabrication of enclosures for electrical components most of which are custom 80- x 60- x 100-in. transformers that can weigh up to 15,000 lbs.

“These transformers are big, they're heavy, they're custom,” says Nav Bhullar, owner of Falcon Machining & Fabrication. “None of the transformers that we manufacture are production run items. These are one-offs, a specific application for specific customers all over North America.”

### Complication

Because Falcon works on mostly custom fabricated products that also must meet specific welding codes, it requires welding equipment that makes high quality welds, as well as equipment that comes with streamlined support, training and parts. The company does not want a myriad of equipment brands, nor random sales support. It is also growing quickly and must automate some of its cutting and welding.

### Solution

After discussing its challenges with ESAB technical sales rep Christian Oliver, Falcon tried ESAB's Warrior 500i CC/CV power source with RobustFeed Pro wire feeder for its flux cored and MIG welding needs. It was a perfect fit, so they ordered five systems and plan on installing three more next year.



### Results

“The Warrior and Robustfeed Pro systems that Christian brought in are fantastic. The guys love those machines and we are moving quicker,” says Bhullar. “You can tell by the way the ESAB machines are built that they are built solidly; there's quality craftsmanship in their equipment.”

## Benefits

### 1. Total Portability

The transformers are too large to move, therefore operators need to move around the product while welding. Older feeders were stationed on top of the power source which inhibited movement. Maneuverability and portability of the RobustFeed Pro feeder was key to increased productivity.



“The RobustFeed feeder doesn’t need to stay on top of the power source,” continues Bhullar. “You can see how they’re versatile, how the feeders can come off and you can maneuver them around to wherever you need them. This saves us time.”

### 2. Quality Welds



The transformers must be leak free, and welds must be tested, including visual, liquid penetrant and sometimes mag particle inspections.

“The operators felt comfortable with the machines right away, and you could see the difference in the quality of the welds,” says Bhullar.

“Some of these single pass weld seams that we’re laying down manually are almost 100 in. long.”

### 3. Complete Support and Training

Exceptional support and training are prerequisites for Falcon, especially as the company adds staff to meet demand for its products.

“By standardizing on the Warrior/RobustFeed system moving forward, we will streamline our operator training, service and wear and spare part needs,” says Bhullar. “The one-to-one service that ESAB provides is outstanding.”

Bhullar notes that training also includes the ability for Falcon personnel to service and maintain equipment. This also includes training for the company’s 14-year-old Plasma Cut 60 automated plasma cutting systems. “We can take that whole machine apart and put it back together with the amount of training that we’ve received from ESAB.”

### 4. Ultimate Automated Plasma

Making repeatable, high-quality welds efficiently requires good fit-up. Falcon’s cuts on material from 1/8 to 1/2 in. must be precise, but also performed at high production rates to keep up with the speed of its business. ESAB’s cutting automation systems provide high cutting speeds to improve efficiency and produce more cut parts per hour, at near perfect precision.



“We love our Plasma Cut 60 with its mechanized torch,” continues Bhullar. “It’s still fantastic to this day, and paramount in our manufacturing of all the parts that we make. I think everything we build comes off of that plasma cutter.”

### Future Plans



To increase productivity while also addressing the global shortage of welders, Falcon plans to test ESAB’s Miggytrac B501 battery powered tractor on some of the longer manual welds.

Welding tractors can increase travel speeds/deposition rates by up to 100 percent compared to manual welding. They move

faster, don’t need to stop for repositioning and reduce operator fatigue and fume exposure. By making continuous welds, tractors reduce rework associated with start/stop defects. In applications like Falcon’s where uniform weld bead profiles and penetration are required, mechanized tractors deliver consistency without the cost or complexity of full automation.

“With demand for our transformers growing, we want to use mechanized welding solutions so we can satisfy our customers,” says Bhullar.



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