

# Applications for Plasma Cutting Technology

Industry: Steel Service Center

Equipment: HPR400XD,® ArcGlide® THC, EDGE® Pro CNC, HPR260XD upgrade



## Steel service center more than doubles productivity with HyPerformance® Plasma HPRXD® technology upgrades

- Productivity more than doubled.
- Cut quality improved and secondary operations minimized.
- XD upgrade improves performance and cut quality.
- Total investment in the retrofits and upgrades paid off in less than a year.



### The company and products

A.J. Forsyth is a full-service steel service center in business for 102 years with seven locations and 185 employees in British Columbia, Canada. As part of the Russel Metals group since 2001, A.J. Forsyth buys directly from steel mills and specializes in value added steel processing. These processes include cut-to-length with corrective leveling, pipe and tube cutting, plasma cutting, and CNC metal fabrication. Standard products consist of flanges, plate, bars, sheet, pipe, tubing and hollow structural steel tubing for a variety of industries. A.J. Forsyth processes carbon steel, stainless steel, aluminum and other non-ferrous specialty metal products in a wide range of shapes, specifications and plate sizes up to 10' by 48'.

### The problem

Increased production demands limited A.J. Forsyth's ability to meet customer requests, especially on orders with a two to three day requested turnaround time. Running four days with two ten hour shifts, along with three twelve hour shifts over the weekend did nothing to alleviate lead times which stretched to ten days. "We were losing orders, and customers were going elsewhere for faster turnaround times," comments Branch Manager Garry Handley.

Outdated cutting equipment on one of the two 10' x 50' plasma cutting machines was compounding the issue by limiting 95% of the high volume production to just one machine. The 15 year old plasma and oxyfuel cutting machine was used only for jobs that required oxyfuel. After the installation of the HPR260 five years earlier, the other plasma system wasn't used again due to customers not accepting the poor cut quality. "Our five year old HPR260 has been reliable and done well handling the workload. Once we installed the HPR260, the older system was instantly obsolete," comments Garry. "We decided we needed a second HyPerformance machine to increase productivity on the second table and help us keep up with demand."

### The solution

Garry worked with his Hypertherm Authorized System Integrator to find the best solution for the technology upgrade and decided to invest in a complete transformation of both cutting machines. The first phase was the most involved. All components on the older cutting machine were

removed and the system was stripped down to the gantry and rails. The HPR260 was moved to the revamped cutting machine, and the retrofit included new drive motors, rack and pinion, gears, and the addition of an EDGE® Pro CNC and ArcGlide® THC. During integration, a new XD control board and firmware were installed in the HPR260 power supply, and a new XD torch and lead set completed the upgrade to an HPRXD with the latest technology.

A new HyPerformance HPR400XD replaced the HPR260 on the high productivity table, with the retrofit completed over a weekend to minimize down time. Garry comments, "Our customers preferred the high definition cut quality of the HPR260; and as a result, this machine was in constant demand while our traditional plasma was under utilized. The HPR400XD installation was fast. We started on a Friday at shut down, and we were cutting with it on Sunday."

### The benefits

"We have more than doubled our productivity," Garry comments. "Our order fulfillment is much faster because we have gone from one table booked for 116 hours of cutting time a week, to two tables booked for 232 hours, and the cut speeds have jumped from 400 inches per minute to 1,000 inches per minute. We were very happy with our HPR260, but after the upgrade to XD and ArcGlide, we are seeing faster cut speeds, less slag, and cut quality that is just beautiful. The upgrade standardized our consumables and controllers for both tables, so our operators are happy. The investment will pay for itself in less than a year, and our customers are pleased with the cut quality and our ability to deliver fast turnaround times. Our other A.J. Forsyth locations are considering similar upgrades because the latest cutting technology produces the best value for our customers."

# Hypertherm®

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