

2023 CASE STUDY

**Midwest Manufacturer
Reduces Coolant Costs
by 85% and Achieves
8-Month ROI**



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About Us

Since 1994 Zebra Skimmers has built a reputation for providing the metalworking industry and other industries with oil skimmers and metalworking fluid management systems.

Our reputation is built on strong customer service, expert technical know-how and delivering American-made, American quality products and solutions.




Background



Midwest-based manufacturer QuantumForge Manufacturing specializes in manufacturing custom automotive parts utilizing Computer Numerical Control (CNC) machines. Their plant runs 24 hours and has over 20 high-end industrial CNC machines.

The company's heavy reliance on these machines necessitates consistent and careful coolant management to prevent overheating while maintaining equipment efficiency.

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The Challenge

In recent years, QuantumForge Manufacturing has encountered a substantial obstacle: increasing expenses on coolant. This issue impacted their profitability and resulted in operational inefficiencies due to the frequent need for manual inspections and coolant replenishment.

In addition, the company discovered that their production staff needed to devote more time to managing coolant levels, detracting from their focus on production work.

Furthermore, improper coolant management resulted in irregularities that caused extra wear and tear on their CNC machines, leading to expensive repairs and production stoppages.

QuantumForge Manufacturing was increasingly worried about its coolant-related costs and recognized the need for a solution.

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The Solution

The management of QuantumForge Manufacturing started exploring automation solutions to manage their coolant processes more efficiently. They evaluated several options before opting for the Dazzle 2 Automated Sump Concentration and Level Management system by Zebra Skimmers.

The Dazzle 2 Coolant Automation system, offered by Zebra Skimmers, was designed to take the hassle out of coolant management for QuantumForge Manufacturing. By automating the entire process, the system guaranteed accurate levels of coolant concentration and brix, eliminating the need for manual checks and reducing the amount of labor required.

QuantumForge Manufacturing's management team eagerly embraced the promise of greater efficiency and cost savings that the system offered. Finally, with the Dazzle 2 system, the company could focus on what they do best: producing high-quality parts without the added headache of coolant management.

This state-of-the-art custom solution employs sophisticated sensors and algorithms to continuously monitor coolant levels, automatically adjusting and replenishing the mixture to maintain ideal conditions. Its cloud-based monitoring features also provide remote oversight, streamlining management, and enhancing accessibility.

Implementation

QuantumForge Manufacturing seamlessly incorporated the Dazzle 2 system into its current setup by installing centralized coolant drop lines on all their factory floor CNC machines.

Zebra Skimmers, on the other hand, was busy building and testing the new system before setup. The Dazzle 2 system was installed smoothly within a few months, causing no significant disruptions to their operations.





Results

After implementing the Dazzle 2 system, QuantumForge Manufacturing saw significant improvements. Firstly, there was a considerable drop in coolant usage throughout the system, leading to a substantial decrease in coolant expenses.

The automation also enabled operators to concentrate on their primary responsibilities, enhancing overall productivity. Additionally, CNC machines endured less damage due to consistent and optimal coolant conditions, leading to decreased maintenance expenses and unplanned downtime.

Regarding financial results, QuantumForge Manufacturing recouped its investment in the Dazzle 2 system in approximately eight months, showing an impressive ROI. Lowered coolant expenses, increased productivity, and reduced maintenance costs were contributing factors.

Conclusion



Here's a few things I like about our coolant system:

- *Live monitoring capabilities*
- *Fully automatic sump filling to the requirements we decide we need, per machine*
- *Customer support is 2nd to none*
- *Different ways to configure our system that meet our needs*

QuantumForge Manufacturing's case is a testament to how adopting the right technology can significantly improve operational efficiency and cost-effectiveness.

The Zebra Skimmers' Dazzle 2 Automated Sump Concentration and Level Management system not only saved money but also enhanced their 24/7 lights-out manufacturing process.

Today, QuantumForge Manufacturing is a more productive, efficient, and profitable operation, thanks to its decision to automate CNC coolant delivery and management processes.



Thank You!

Please contact Zebra Skimmers
for more information about
automating your CNC coolant system

**For confidentiality purposes, we have changed
the name of the company in this whitepaper to
QuantumForge Manufacturing*



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