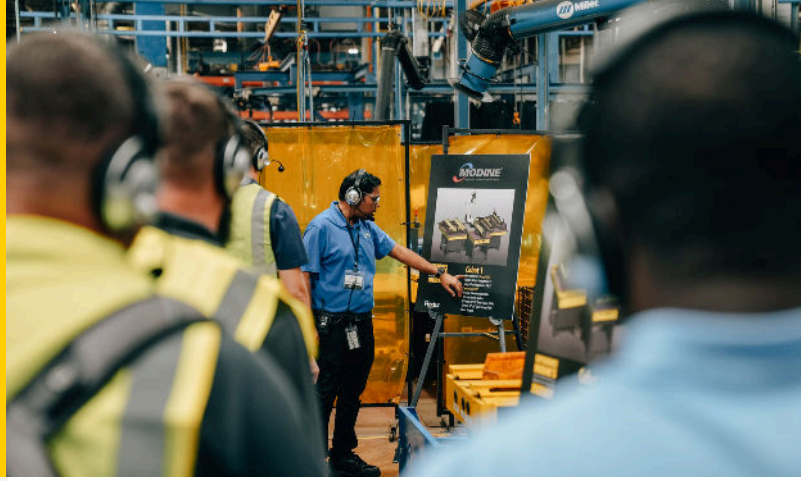
MODINE CASE STUDY

Transforming Welding Operations with Cobots



CHALLENGES

Modine encountered several hurdles that hindered their operational efficiency. Their collaborative robots (cobots) were underutilized, sitting idle and unintegrated into workflows. The lack of in-house automation engineers further complicated matters, as the team lacked the expertise to effectively deploy and manage advanced robotic systems. On top of this, their welding operations required highly intricate tasks, such as fabricating watertight tanks and performing precise linear welds. Some parts required up to 900-inches of welds. These issues highlighted the need for innovative solutions and a capable partner to drive a meaningful transformation.

OBJECTIVES

Modine aimed to optimize its welding operations by integrating cobot technology. The primary goals were to significantly increase throughput and efficiently manage high-mix, low-volume production, ensuring both precision and productivity needed to meet increasing demands in production.



SOLUTIONS

Modine collaborated with Flextur to implement advanced cobot solutions and custom-designed, fast, affordable fixtures tailored to their production needs. This partnership resulted in the re-deployment of two idle collaborative robots. Additional cobot cells have been added including a seven axis and turntable. The cobots flexibility has enabled efficient handling of complex welding tasks. Modine also prioritized workforce development, training 12 manual welders to independently operate the cobots. This comprehensive approach maximized Modine's cobot utilization, improved efficiency, and strengthened the team's technical capabilities.

RESULTS

- Increased throughput by over 250%
- Increased automation welding hours from just 5, to 600 per month
- Gained ability to more consistently weld large, complex parts
- Strengthened team's technical capabilities

CONCLUSION

Modine's award winning integration of cobots demonstrates the transformative impact of strategic partnerships. By collaborating with Flextur for welding efficiency and investing in workforce training, Modine achieved a 250% increase in welding throughput, revitalized underutilized resources, and established new industry benchmarks for efficiency and productivity within their Jefferson City facility.

Flextur™

877.435.3988

www.flextur.com

16875 Jericho Rd, Dalton, OH 44618