



Adding Electronics to a Mechanical Product

Electronics add convenience to virtually every aspect of today's life. That said, companies with predominately mechanical products often need a helping hand when entering the electromechanical world. EDM's team is expert at helping companies bridge that gap.

THE SITUATION

A stove manufacturer was looking to add more innovative features to its products.

THE PAIN POINT

While the customer recognized the value of adding electronics, there were no electrical engineers on their staff.

"Our founder, Robert Roberts, convinced the customer of the advantages of adding electronics to the stove's controls."

Dave McAden

Chief Technical Officer at EDM

CONSIDERATIONS

- Improved competitiveness

ASSUMPTION

- EDM designs an electromechanical control to replace the mechanical control.

ONGOING

EDM's ongoing engineering support has helped this customer address an evolving market over multiple product generations.

INNOVATION #1

Bridging the Digital Gap

EDM's team proposed a microprocessor-based control and developed it for the customer in 1990 and has continued to support their electronic engineering and production needs for over 30 years.

INNOVATION #2

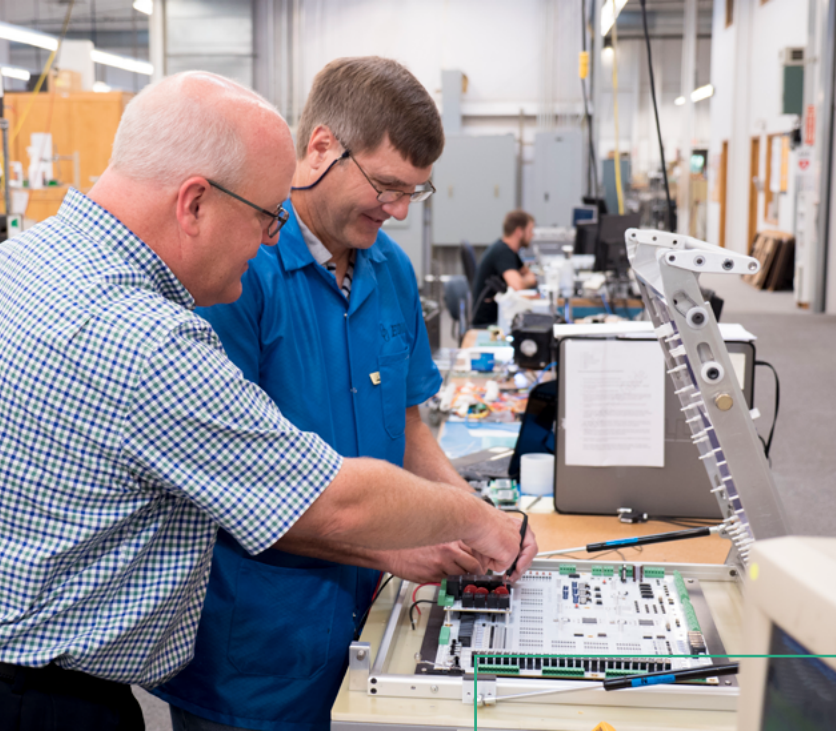
Addressing Evolving Regulations

As wood stoves gained in popularity, EPA's regulations grew. In 2004, EDM's team helped the customer redesign the control to a version that helped better comply with changing regulations. In 2015, the team designed a programmable control with a scrolling message display that allowed the user to set specific heating profiles. The team's design included an overlay label with buttons and a logo integrated with a metal housing manufactured at the customer.

INNOVATION #3

Balancing Cost and Functionality

Another area where EDM's engineering team has added value is in helping the customer balance cost and functionality, by identifying cost competitive options needed to achieve desired functionality. This collaborative process has also extended to the customer's stove commissioning process. Working with the customer, the engineer team developed a ModBus interface that lets non-technical personnel at the customer easily change to the correct profile and program the control when they commission each stove.



CONCLUSION

This more than 30-year relationship has helped the customer introduce innovative features into its product line without having to add electrical engineering capability in-house. EDM has designed and manufactures the control, which is later integrated with the stove at the customer's facility. EDM's combination of engineering and manufacturing expertise has helped support the introduction of increased functionality at competitive cost.

