fast heat
Innovation In Control™

Case Study

Fast Heat's Hot Runner Temperature Controller *vs.* Industry Standard Controller: Significant Labor Savings

Automotive Customer's Two-Month Study Comparing Fast Heat's Low-Cavitation Hot Runner Temperature Controller and Customer's Current Industry Standard Modular Controller

Who: Tier 1 International Automotive Parts Manufacturer
Why: Plant Productivity, Hard-to-Mold Materials
Result: Switched from Industry Standard Modular Temperature Controllers to Fast Heat's Low-Cavitation Temperature Controller

"The cost savings in labor alone shows good ROI and payback," the Automotive Customer's Manufacturing Engineer said.

Challenge: The company's Process Engineer noticed his press operators spending an inordinate amount of time at the plant's modular hot runner temperature controllers during the course of their shift—constantly tweaking, configurating and otherwise monitoring modular controllers' performance. The Process Engineer also began to question whether the operators were adhereing to the proper start-up procedures for cold molds. He knew that mold temperatures were supposed to come up to temperature gradually and evenly—manifolds first, then cavities—to prevent expansion/contraction wear in the mold. But with a single operator assigned to several presses, it was unlikely they could adhere to start-up best practices with the modular controllers they were using.

Solution: Fast Heat offered a solution to both problems with the low-cavitation intelligent hot runner temperature controller. Three specific features on the Fast Heat controller that addressed this Process Engineer's concerns are:

(1) Recipe storage. The Fast Heat controller allows for up to 10 mold "recipes" to be stored for later retrieval. Recipe storage means the operator doesn't have to look-up the mold requirements, and then set each and every zone on the modular controllers individually. With the Fast Heat controller, they can simply select the correct recipe for the mold, and walk away.

(2) Evensoak. This feature monitors the temperature increase in the mold, and turns on each zone at the right time. Again, no operator time is spent here, the operator turns it on, and walks away.

(3) Precise temperature control. Fast Heat's steady algorithm gives it the intelligence to maintain precise consistent temperature in the mold, eliminating the tweaking and monitoring required with the modular controllers.

The Process Engineer took advantage of Fast Heat's demo program, and measured the operator time required to run the Fast Heat controller for a full month, across four different production lines, for 24-hours per day. He compared that against the operator time required to run the same production lines over the same period of time with modular controllers. The results were staggering, yielding an ROI of less than nine months per controller.

Result: "The cost savings in labor alone shows good ROI and payback," said the Manufacturing Engineer who conducted the analysis.

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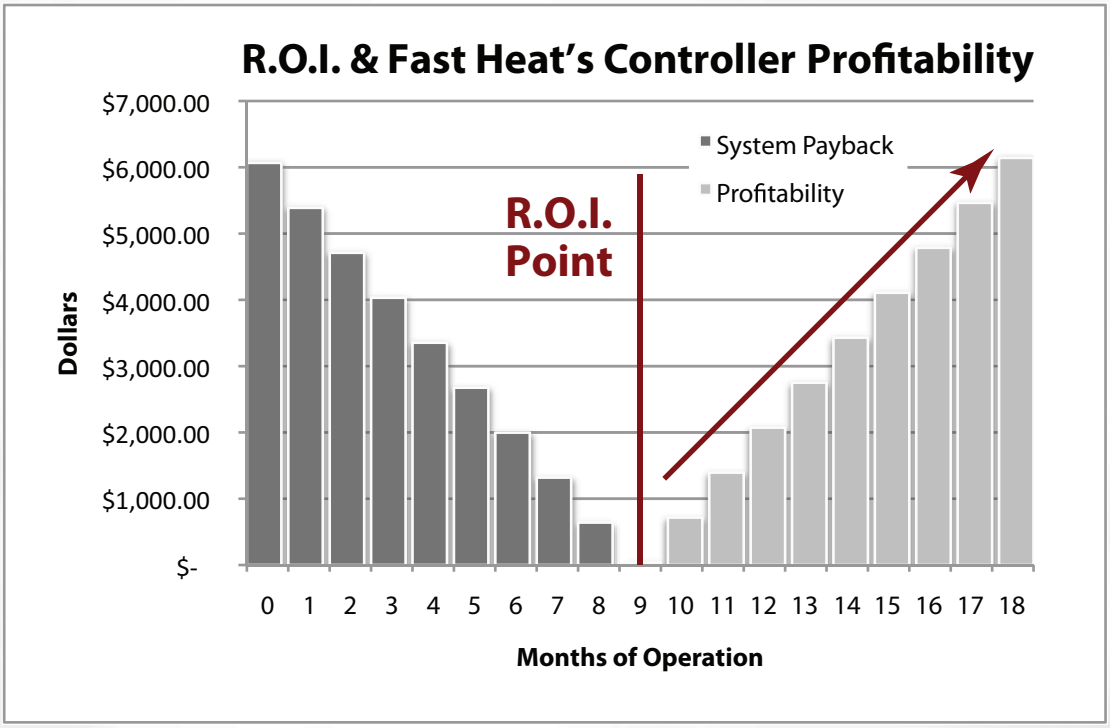
A Synopsis of Findings:

- The study collected data over two months – one month for the modular controller and one month for the Fast Heat controllers.
- The controllers were evaluated on four different production lines in the plant.
- The low-cavitation controller actually produced an average of 1.2% more parts.
- Operators in the plant spent an average of 2.3 hours/day across three shifts monitoring and tweaking the modular controller.
- Operators spent less than 0.4 hours/day across three shifts monitoring the Fast Heat controller.
- 1.9 hours per day x $17.00/hr. labor rate x 250 days per year = a cost savings of $678/month, $8,075/year.
- A new 12-zone Fast Heat controller costs less than $7,000.
- Payback is less than nine months.

Outcome: The Manufacturing Engineer used this study to justify replacing all the modular controllers in his plant.



Return on Investment assuming a $678.30 labor savings per month. The Tier 1 International Automotive Parts Manufacturer's Fast Heat low-cavitation hot runner temperature controller investment becomes profitable in the 9th month.