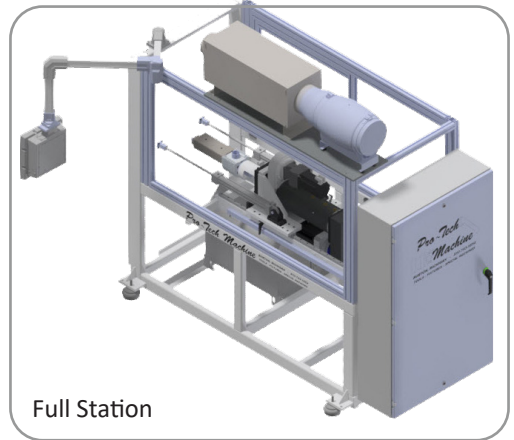


INJECTION MOLDING

CHALLENGE

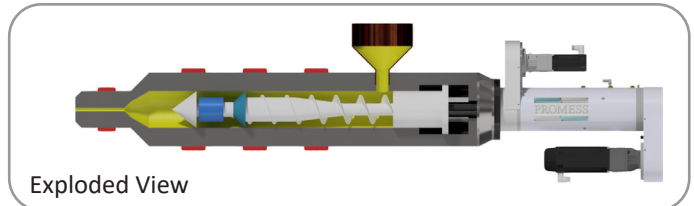
Problem: A manufacturer creating injection molded automotive components was attempting to do everything they could to prevent defects which resulted in low-quality components reaching their customers' floors. Defects they had previously seen primarily resulted from a low level of control and poor positional accuracy, as well as a lack of ability to respond to the differences in specific different components (i.e. plastic quality, temperature & humidity).

Desired Results: The manufacturer needed a reliable process that could ensure a verified, complete fill which could be held for the appropriate amount of time and under the needed force. And because there were multiple components to be produced, in a mix that had to be responsive to customers' needs, flexibility was also a major concern.



SOLUTION

Promess Solution: Promess responded to the customers' needs by working closely with their engineers and others to develop the Injection Molding Machine with fully programmable control of both linear and rotational motion with integrated, in-process position, force, & torque sensing. The Promess controller is also capable of receiving input from additional pressure & temperature sensors when needed. The technology at the heart of the Injection Molding Machine is Promess' REMAP (Rotational Electro-Mechanical Assembly Press) system which combines encoder-based rotational and linear motion, Promess' patented reload algorithm, programmable control with easily adjustable process parameters, and in-process monitoring & gaging to verify every aspect of the process.



Results: The manufacturer reduced the instance of short shots almost down to zero with the Promess reload algorithm and easier "infinite" process adjustability, and when problems did occur (usually due to incoming quality or some other factor beyond the manufacturer's control) the manufacturer had full, detailed knowledge of the problem so that it could be contained, "bad" parts could be removed, and the situation could be immediately remedied to prevent further quality issues going forward. Additionally, that same data can be used for internal process improvement that, along with a reduced rate of scrap, may significantly reduce costs.