Success Story
Injection Molding for Medical Device Industry

The Problem
A large injection molding company that produces components for the medical device industry was having difficulty maintaining the quality of a particular molded part. Using a nylon material, production runs were inconsistent, resulting in short shot, or not completely formed parts. This was causing machine downtime, as well as increased part inspections and scrap.

The production manager and quality manager determined that either the nylon material was not coming into the mold at the proper temperature, or the pressure of the material being pushed into the mold was too low. They decided to use SensoNODE™ Blue Sensors and the Voice of the Machine™ Mobile App to analyze the temperature and pressure levels in the mold injection lines.

The Solution
Working with the customer, Parker assisted with the installation of SensoNODE Blue Sensors in locations within the injection-molding machine that would allow continuous monitoring of the temperature and pressure. While running the mold, the quality manager was able to collect data and watch the resulting molded parts as they ejected from the mold.

With SensoNODE Blue Sensors and the Voice of the Machine Mobile App used to collect and analyze the data, the quality manager discovered that there was a pressure drop at certain times during the molding process. Upon further investigation, the manager discovered that a small leak in a pressure hose was causing the pressure drop. With the hose replaced, the quality manager used SensoNODE and Voice of the Machine™ to ensure the pressure remained stable during the process and that the parts were properly formed.

Success Factors
- Accurate and continuous monitoring of the temperature and pressure lines allowed for quick diagnosis of a problem that was difficult to identify.

Customer Value
- The injection molding company was able to fix the problem quickly, minimizing downtime and scrap. The company also avoided more serious issues that come from shipping improperly molded parts to a medical device customer.