



FORUM

Success Story

Forum Plastics Tool Transfer Program Solves
Quality Issues for Surgical Device Company

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BACKGROUND

A surgical device company was experiencing quality issues with a molded part produced by a competitive injection molder. The device company produces a trans-sulcal system intended for subcortical access to diseases such as brain tumors, vascular abnormalities and malformations, and intraventricular tumors and cysts.

The part in question was a single cavity knob with five different-sized internal bore diameters that were produced with interchangeable core pins. The company's molder was producing non-conforming parts that had defects including voids, sinks, and flow lines which are circular ripples or grooving on the surface of the part. These non-conforming parts were creating rejects, causing customer concerns regarding the visual quality of the component. This led to questions about possible performance problems and field failures.

When the molder was unable to produce acceptable parts, the surgical device company approached Forum Plastics. As Forum had previously produced several tools and other high-quality molded components for the company, the commodity management and supplier quality team had great confidence in Forum's ability to properly process the tool as part of an accurate and efficient solution.

SOLUTION

The surgical device company's tool was brought in through Forum's tool transfer program. As part of this program, a new tool undergoes a standard inspection process. A checklist is also conducted at this time, covering a full, comprehensive inspection of:

- Cavities
- Cores
- Mold base design and construction
- Cooling
- Material hardness verification
- Ejection systems
- Sprue
- Runner
- Venting
- Gate design

Forum then set up the tool in an appropriately sized molding machine where the shot size to barrel capacity ratio met industry standards. Our process engineers performed a comprehensive scientific molding process to study the tool. After analyzing the results, we developed a robust, stable molding process for the company. If slight modifications need to be made to the tool to optimize the process, this is typically included in the cost of the transfer program.

RESULT

Using Forum Plastic's scientific molding process, our senior process engineer identified areas in the tool that needed improvement. Changes were made to the injection gate geometry and proper venting was added onto the tool allowing us to establish a stable process in the correct-sized molding machine. This yielded a range of components that met full validation protocol and the surgical device company's performance requirements while producing parts with zero defects. In addition to this tool, Forum has several other components for the surgical device company, and we've had consistent success molding them with high quality.

Learn more about Forum Plastics molding solutions and tool transfer program by contacting [Doug Hungerford, Director of Engineering](#), or [visit our website](#) for more information.



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