

Vention Rapidly Transfers and Validates 8 Tools for Complex Molded Components



CUSTOMER SITUATION

A midsize, market-leading blood management company was having major quality issues with the molding supplier for critical components of its flagship product, resulting in supply chain interruptions and a high rate of customer complaints.

The customer needed to transfer tooling for 3 acrylic, single-use components of a blood transfusion device—a total of 8 multicavity hot runner tools—with an aggressive deadline of 4 months. These were complex components with tight tolerances and more than 20 critical-to-quality (CTQ) requirements.

The customer had worked with Vention before and felt confident that Vention had the technical expertise and resources to meet its needs.



VENTION SOLUTION

A dedicated, cross-functional Vention team worked closely with the customer to manage the project, tracking progress weekly and quarterly.

Vention's tooling and technical expertise was critical for support of this program, starting with seasoned tool and die makers and tooling engineers, including a master molder process engineer. In addition to troubleshooting routine transfer issues, the team used design of experiments (DOE) and scientific injection molding process development to identify and solve a cooling problem. Vention also developed programs for preventive maintenance, tool repair, and spare parts management designed to optimize the customer's tool assets.

As part of the transfer, the customer had established stringent new validation system requirements. Vention

was the only company at the time that could meet these high demands. Vention's skilled engineers and supporting managers executed these protocols flawlessly, meeting the customer's timeline and ensuring high-quality production.

To meet the customer's rigorous quality requirements and high-volume production needs, Vention created 6 dedicated, state-of-the-art molding cells. The team invested in equipment tailored to the customer's needs for 3 new cells and upgraded 3 existing cells with more powerful thermolators and servo motor robotics.



OUTCOME

Vention successfully completed the tool transfer, validation, and production ramp-up to more than 1 million units per month, meeting the 4-month deadline.

The result was excellent tool performance, no supply chain interruptions, and a dramatic increase in customer satisfaction.

In addition, employees throughout the facility were made aware of the critical role these components played in the customer's business and created additional internal infrastructure needed to meet the customer's stringent quality demands and sustain this high-volume production.

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ventionmedical.com/case-studies
info@ventionmedical.com

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