HIGH PRECISION, HIGH VOLUME PLASTICS MANUFACTURING

A tier one medical OEM needed 45 million plastic components used for drug delivery, manufactured with a tolerance of ten thousandths of an inch. Using automation and scientific molding Sanmina achieved less than 500 DPPM and delivered $900K savings on injection mold tool investment.

THE CHALLENGE

A tier one medical OEM needed 45 million plastic components manufactured for a drug delivery device. 20 different parts with tolerances of ten thousandths of an inch were required at a fallout rate of 500 DPPM or less. The customer also wanted to manage the cost of ownership by reducing initial capital investment in tools and increasing tool life.

WHY SANMINA

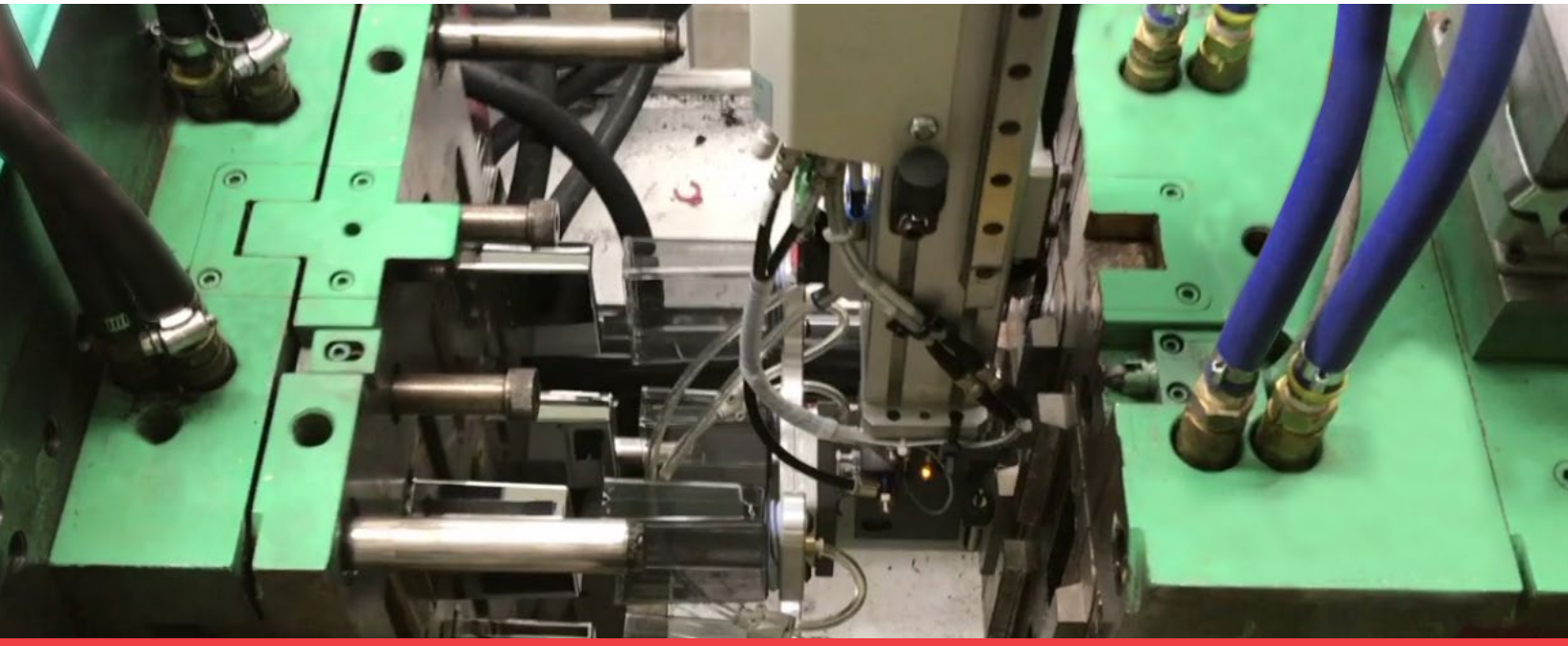
Sanmina's automation engineering capability, scientific molding approach and 40+ years plastic injection molding experience gave the customer tremendous confidence in Sanmina's ability to design class 101 tools and develop manufacturing processes capable of delivering high precision medical plastics at high volume.

SANMINA'S APPROACH

- A cross functional engineering team with skills including tooling design, resin expertise, manufacturing process development and quality was established.
- The team used a scientific molding approach to design the class 101 tools, choose the resin and develop the manufacturing process.
- Simulation tools were used to analyze flow time, pressure and temperature in the mold during the tool design phase.
- Sanmina's engineers automated the process to minimize handling and achieve consistent results.
- 8 injection molding presses complete with automation operate 24/7 to produce the volumes.
- IQ, OQ and PQ qualifications required for a medical product were conducted and documented.
- A comprehensive tool analysis is presented to the customer monthly with preventative maintenance recommendations.

RESULTS

- Less than 500 DPPM was achieved on a combined volume of 45 million across 20 parts.
- The expected shot yield has been exceeded on all tools. Class 101 tools are normally guaranteed for 1 million shots. All tools have achieved more than twice this number. Some tools have yielded more than 10 million shots.
- The original tools are more than ten years in production.
- $900K saving resulted from the scientific molding tool design, pro-active tool analysis and preventative maintenance.



ABOUT SANMINA

Sanmina makes some of the most complex and innovative optical, electronic and mechanical products in the world. Recognized as a technology leader, Sanmina provides end-to-end design, manufacturing and logistics solutions, delivering superior quality and support to Original Equipment Manufacturers (OEMs) primarily in the communications networks, computing and storage, medical, defense and aerospace, industrial and semiconductor, multimedia, automotive and clean technology sectors.

More information regarding the company is available at www.sanmina.com