

Double Side Gated Balanced Hot Runner Technology

New Proprietary Double Side Gated Hot Runner Innovation Leads To Straighter Parts

Molders in the medical disposable market are faced with many challenges. Manufacturers of pipette tips and syringes are especially challenged to meet quality requirements for straightness. Automated cells in medical diagnostic systems are requiring greater accuracy for the pipette tips used due to the close spacing of the tips and their targets.

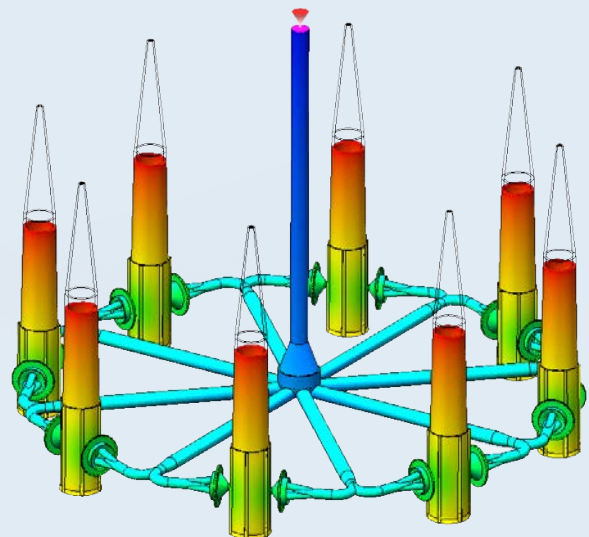
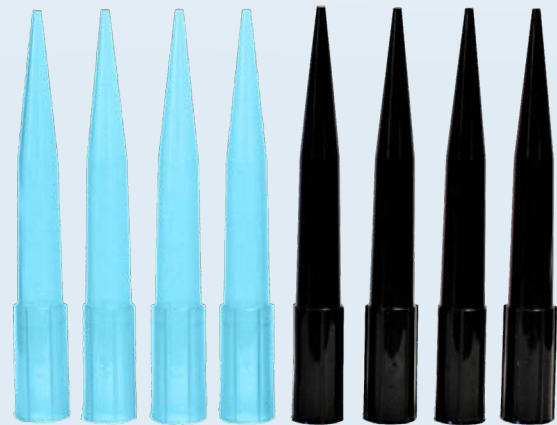
In the past, these parts were typically produced using cold runners that filled the parts through dual gates. Molders have tried to migrate to hot runner technologies to eliminate the handling of runners and waste associated with this method. There are some success stories out there of molders using single gate hot runner systems to produce these parts, however they often require unconventional methods of "tuning" the mold to produce parts to specification. This may require stressing the core steel in a way that causes premature wear to the molding components.

After many years of building molds for these markets and using the available hot gating technologies, Cavaform decided to take on the challenge of developing a better solution.

Cavaform engineering team developed a double side gated hot runner concept to solve this challenge. At the heart of the invention is a balanced manifold that fills each part through two gates. The gates fill the cavity simultaneously, creating a uniform flow front as each part is filled. This unique approach to gating produces parts that meet or exceed industry standard for part straightness.

This solution is also designed to be easily maintained. The simplicity of the design eliminates complex procedures during assembly. The cavities and tips are easily accessed from the mold parting line, both on the tool room bench and while the mold is in the injection molding machine.

While the system was designed for the challenges for the medical disposable market, any long draw part requiring improved straightness, such as a Pen Barrel and Syringes would benefit from the balanced fill provided by this solution.



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