

REVOLUTIONIZING PHARMACEUTICAL PRODUCTION:

PureTain® Single-Use Systems for Final Fill Applications

PureTain®

CHALLENGE

Designing a Multi-Purpose Filling Line for Biopharmaceutical Products

Flexibility, safety, and efficiency are key factors for success in biopharmaceutical manufacturing.

A pharmaceutical customer was facing the challenge of establishing a flexible, multipurpose filling line. They were looking for a single-use solution that could accommodate products, adapt to volume variations, and manage the challenge of very small tubing inner diameters (ID) for very small filling volumes, essential for the success of the filling line. Additionally, safe product transfer into the isolator had to be assured.

SOLUTION

Customized Final Fill Assembly Including Molded Solutions

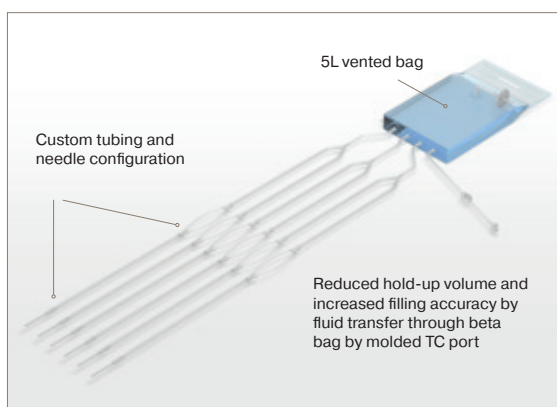
Therefore, a variety of customized, molded final fill assemblies have been designed featuring various tubing diameters for different filling volumes and products. These solutions feature:

- **Molded double Y-reducer segments:** Key in enhancing safety and reliability. Excellent filling volume control and reduced peristaltic pump pulsation.
- **Molded straight reducer:** Optimizes fluid flow, eliminating barb fitting, and reduces the contamination risk.
- **Micro molding technology:** Enables the use of tubing with an inner diameter down to 1/32" while meeting stringent volume and flow criteria.
- **Molded stopper for tubing feed-through:** Offers a secure and closed product transfer via a beta bag into the isolator.

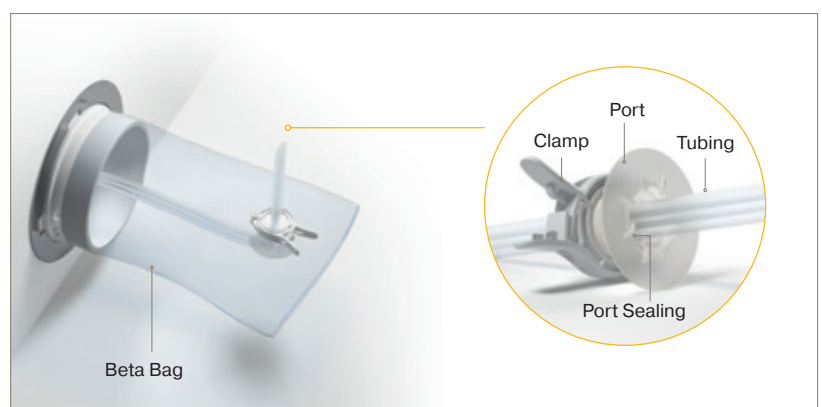
BENEFITS

Better Dose Control and Higher Process Reliability

- Parker's PureTain® customized single-use final fill assembly, with its flexible material and molding capabilities (using silicone and TPE tubing), proved to be the ideal solution for the line design and challenges faced by the customer.
- Accuracy of the filling processes improved and resulted in greater process repeatability. Process reliability saw major enhancements, with a notable reduction in the risk of contamination. Furthermore, the single-use system facilitates rapid change-over times, resulting in considerable cost savings and enhanced production flexibility.



Final fill manifold enabling seamless fluid flow and reduction of leak points by means of overmolded connections



The beta bag tubing feed-through enabling closed system filling transfer into isolator



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