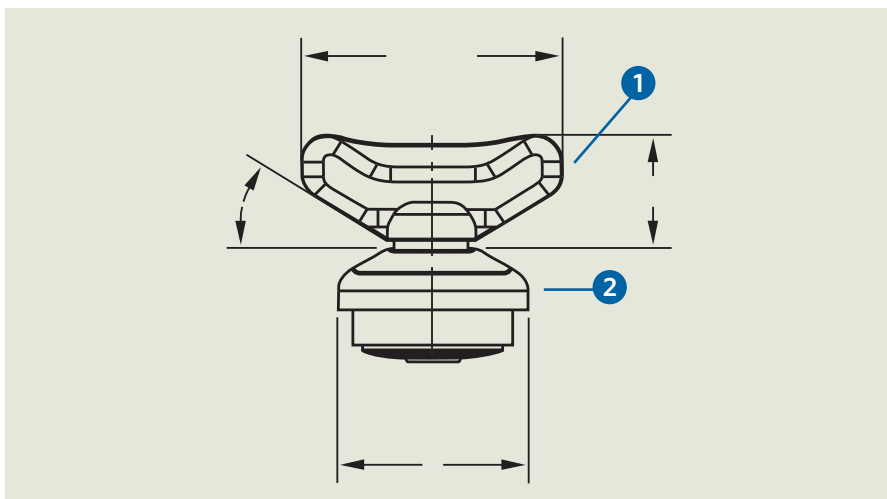


## SECURE-VIAL™ delivery system — for innovative and cost effective delivery of injectable drug products

Catalent's SECURE-VIAL™ technology (patent pending) represents an exciting evolution in the application of our Blow/Fill/Seal capability to injectable drug products.

- **Quality and sterility assurance.** Our vial is molded, filled and sealed using an advanced aseptic Blow/Fill/Seal process—minimizing container exposure to the environment vs. traditional aseptic filling.
- **Cost efficiencies.** Unlike traditional aseptic filling, Blow/Fill/Seal is a highly automated process which reduces labor costs and eliminates processing steps (e.g., vial clean and preparation). The vial is made from a polypropylene resin that is significantly less expensive than glass on a per unit basis.
- **Safety.** Polypropylene construction reduces the risk of injury and product loss due to glass vial breakage.
- **Ease of use.** Our vial has an innovative “pop-off” closure which allows one-handed opening—enabling easy access.
- **Customization and branding capabilities.** Catalent can customize our vial to help your product stand out in the marketplace!



1. The vial top can be customized for specific customer design preferences.
2. Unique stopper design allows robust seal within the Blow/Fill/Seal container, while providing a raised target area for easy swabbing and needle access.



### SECURE-VIAL™ delivery system

1. “Pop-off” opening to expose stopper surface
2. Rubber stopper
3. Color-coded cap that stays with the vial after opening
4. Polypropylene material

# The SECURE-VIAL™ delivery system is manufactured using an advanced aseptic Blow/Fill/Seal process

Blow/Fill/Seal is the combination of three major processing steps—container molding, container filling and container sealing—within a single contained process. The advanced aseptic process is a highly automated system with minimal operator interface.

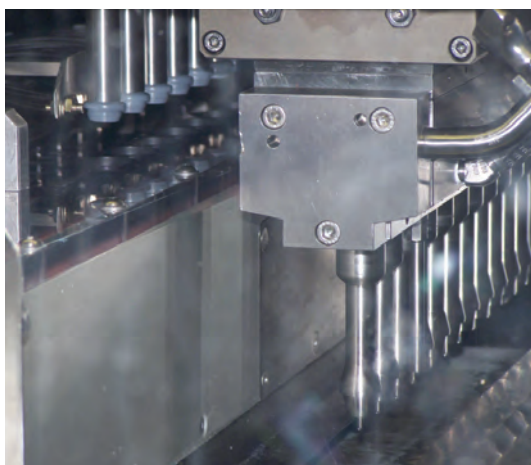
**Step 1:** Plastic resin is melted and extruded into hollow tubes called parisons.

**Step 2:** The container mold closes on the parison, and the top of the parison is cut.

**Step 3:** Container formation is completed by applying vacuum to the exterior of the container and by blowing filtered air into the interior of the container. The electronic fill system then dispenses a specific measured quantity of product.

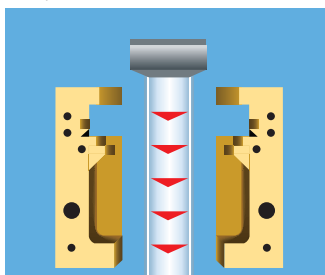
**Step 4:** A vacuum tube holding a rubber stopper lowers into the parison. The stopper is compressed into the container neck, forming a seal.

**Step 5:** The seal mold closes, forming a fully integral container.

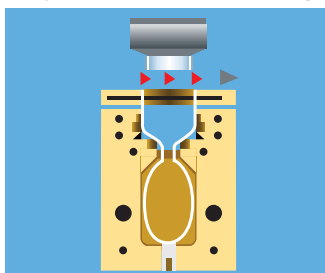


Catalent's SECURE-VIAL™ filling line. Filling operation prior to stopper insertion.

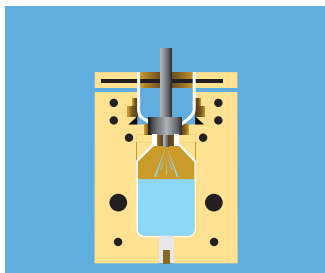
Step 1: Plastic extrusion



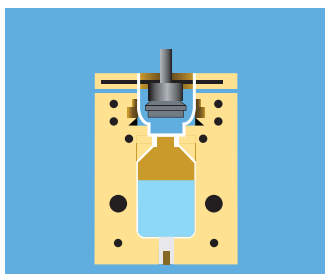
Step 2: Container molding



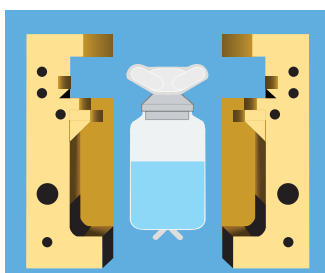
Step 3: Container filling



Step 4: Stopper insertion



Step 5: Mold release



## Catalent's Blow/Fill/Seal technical capabilities

- World-class critical utility systems
  - Water for injection (8,000-gallon storage capacity)
  - Deionized water sourced from on-site wells
  - Pure steam generator
  - Compressed air, nitrogen, vacuum, and chilled water utility systems also available
- Available solutions for products that are temperature-, light-, oxygen- or delivery-sensitive
- Analytical and microbiology laboratories

Catalent is well positioned to serve you wherever you do business. Contact us today.

### Catalent Pharma Solutions

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