

OEM

Bulk Liquid Handling Program



 **MEISSNER**

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Meissner's OEM Bulk Liquid Handling Program offers a robust and consistent solution bridging the collaboration between integrators and end users for custom packaging in single-use bulk liquid handling applications. Supporting volumes from 250 mL to 1000 L in 2D and 3D designs, the program leverages the solid foundation of quality, technical capability, and operational excellence employed for Meissner's One-Touch® portfolio of single-use systems.

Our Approach

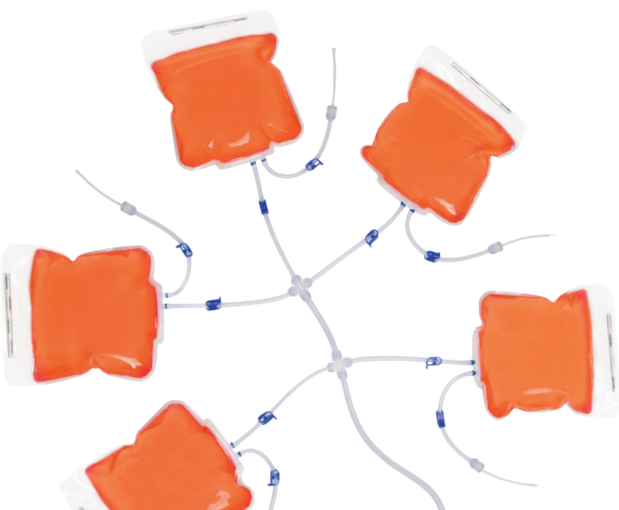
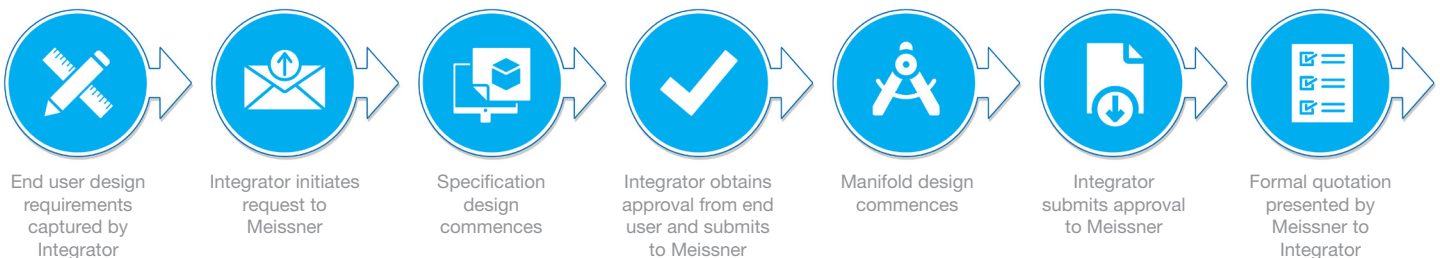
The unique manufacturing approach Meissner implements allows for component recommendations and custom solutions to mitigate supply chain risk while producing the optimal packaging assembly. With a range of offerings tailored as needed for applications managing cell culture media, buffer, and bulk product, the Meissner portfolio for Bulk Liquid Handling includes:

- Individual Biocontainers
- Biocontainer Manifolds
- AccuFill™ Aseptic Filling System
- FlexStation® Rigid Outer Containers
- Tubing Sets



Bulk Liquid Handling Process Flow

Combining years of expertise across multiple departments, the Meissner team strives to seamlessly collaborate with integrators to reach the goal of delivering a custom packaging solution. After qualification, the following general procedure occurs.



Biocontainer Manifolds

When Biocontainer Manifolds are the preferred filling paradigm, end user requirements must first be established to create a customer-facing print, or DCF. The DCF print displays the packaging format in the manner of the finished product of an Individual Biocontainer. Only when the DCF is approved and sent to Meissner will design of the Biocontainer Manifold commence.

Custom Configurations

Meissner offers a full range of custom configurations for Biocontainer Manifolds. Adjustments to the quantity of biocontainers and volume may be accommodated according to project needs. Please note that as the overall manifold volume increases, so does the handling risk. It is highly advised to employ operator training when managing manifold filling operations. Operating at volumes above or below nominal is not recommended. A few manifold configurations are listed in Table 1.

Shipping Studies & Qualification

FlexStation® Rigid Outer Containers complement Meissner’s line of single-use biocontainers to provide robust fluid management solutions ideally suited for intra-facility transfers and inter-facility transport of bulk liquid and are a cost-effective alternative to stationary stainless steel storage bins. When used in combination, Meissner’s single-use systems portfolio of biocontainers deployed in FlexStation® Rigid Outer Containers has been qualified for liquid transport in accordance with International Safe Transit Association (ISTA) Series 3 testing. Following best practices, Meissner strongly encourages shipping validation studies with real world testing to mimic the actual shipping procedure by the integrator to the end users.

Quantity of Biocontainers	Volume per Biocontainer	Batch Sizes
10	500 mL	5 L
10	5 L	50 L
10	10 L	100 L
10	20 L	200 L
5	50 L	250 L
2	100 L	200 L
4	100 L	400 L
2	200 L	400 L
4	200 L	600 L
2	500 L	1000 L
1	1000 L	1000 L

Table 1. Biocontainer Manifold Configurations Table



Complements

Meissner's highly trained and knowledgeable Applications Engineering team will gladly assist end users and integrators in evaluating requirements for the most appropriate components and fluid contact materials. The One-Touch® Single-Use Systems and Rigid Outer Container Green Docs on the Meissner website feature common components as a general resource.



AccuFill™ Aseptic Filling System

Meissner's AccuFill™ Aseptic Filling System specializes in the design and manufacture of innovative filling solutions for biopharmaceutical products. The technology employed allows for single-use aseptic filling at a significant savings compared with manifold filling. Meissner's proprietary disposable fill system liners provide the option of a fully disposable consumable, eliminating the risk of cross contamination. It also reduces the cost of cleaning and documentation at all levels of pharmaceutical production. With Meissner's individual biocontainer assemblies designed to interface directly with the AccuFill™ Aseptic Filling System, implementation of the aseptic filling system produces invaluable benefits, such as automation, speed, and operational flexibility to allow integrators to service a variety of end user needs.

Ordering Information

For further questions regarding implementation of your operating paradigm, please reach out to OEM@meissner.com.