

Hicoflex® Technology



Buck®

Disposable High-Containment Interface

GEA Pharma Systems supplies advanced technologies for the processing of Active Pharmaceutical Ingredients (API) for the production of oral and parenteral dosage forms.

GEA Pharma Systems strives for *Price/Performance Leadership* providing its customers with highly cost-effective, integrated systems for the pharmaceutical industry. GEA Pharma Systems is dedicated to innovation and thereby providing durable quality through its well-established brands: **Aeromatic-Fielder™** and **Collette™** - batch and continuous granulation, drying, pelletizing and coating; **Buck®** - contained materials handling; **Courtoy™** - tablet compression; and **Lyophil™** - pharmaceutical freeze drying.

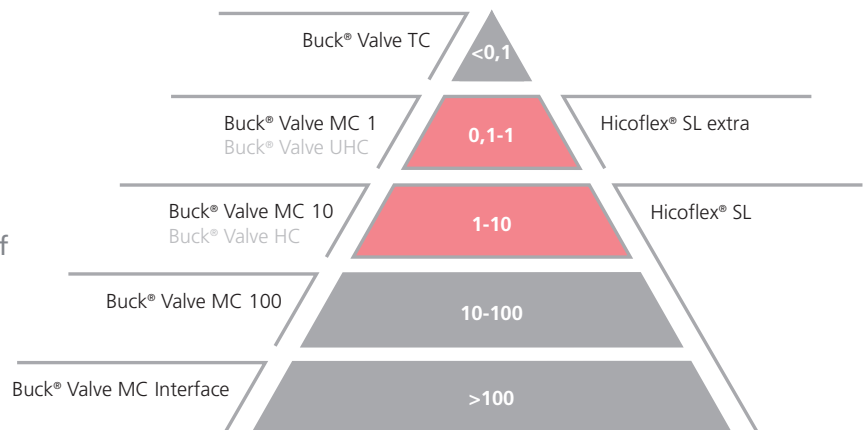
GEA Pharma Systems' activities include partnering with customers to develop new products and enhance clinical effectiveness; the supply of R&D-scale and stand-alone production equipment; and the installation of complete integrated production lines.

Disposable High-Containment Interface

Hicoflex®

For over 10 years, Buck® has supplied dust- and contamination- free containment interfaces for the safe transfer of powders, particulates and tablets in the pharmaceutical industry.

These interfaces ensure the protection of both people and products when charging and discharging high-potent APIs.



Containment Levels:
Short Term Exposure ST TWA [mcg/m³]



Simple materials handling for Flexible Transport Containers

The Hicoflex® disposable interface performs a variety of functions simultaneously: it provides a reliable means of secure transportation, an ergonomic docking system, a contamination-free way of transferring media, and a reliable sealing system for transport containers. It's simple, effective and inexpensive.

Benefits	
Cost Saving	<ul style="list-style-type: none"> • disposable, so no cleaning or validation • inexpensive • full yield discharge • no maintenance
Safety	<ul style="list-style-type: none"> • no cross contamination • high operator and product protection
Flexibility	<ul style="list-style-type: none"> • multi-purpose • very fast installation • simple handling • visual product transfer

Operating units



Hicoflex® pneumatic opening tool
Automated and controlled opening tool, located at the Hicoflex transfer port of the process equipment.



Hicoflex® manual opening tool
Efficient, manually-operated opening tool, located at the Hicoflex transfer port of the process equipment.

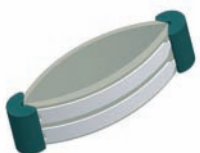
Process description



Undocked and Closed



Docked and Closed



Docked and Open



Hicoflex® manual opening tool (hand-held)
Mobile, hand-held opening tool for use during production.

Disposable High-Containment Interface

Hicoflex®

Accessories

- Bag hanger
- Opening tool bracket
- Transition pieces

Specifications

Suitability powders, granules, pellets, tablets

- Features**
- 100% FDA conformity
 - anti-static material available
 - produced under Clean Room conditions class 5
 - specialities available on demand

Options all Hicoflex units are pre-sterilized by Gamma irradiation (50kGy)

Hicoflex® products



Hicoflex® – Charge Bag
Fully-contained powder transfer bag for contamination-free charge/discharge of hazardous materials.



Hicoflex® – Adaptor
Process equipment adaptor that fits all Hicoflex® bags. Tri-clamp size: 2", 4", 6"



Hicoflex® – Spray Bag
Unit to rinse the internal surfaces of the adaptor before removal to ensure full operator protection.



Hicoflex® – Sample Bag
Fully-contained sampling device for sampling the process through an adaptor or bulk material out of a Hicoflex® charge bag. Sampling volume: 1/5/10 ml

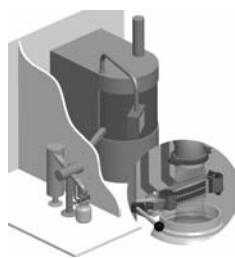


Hicoflex® – Charge Bag plus
Hicoflex® charge bag equipped with an internal rinsing device to ensure a full yield discharge.

Typical applications



Contained reactor charge with hazardous materials



Contained discharge of tablet press



Contained material charge/discharge of an isolator



Contained material charge/discharge of a process unit



Central Know-How on a Global Scale

Based on a strong commitment to research and development, pharmaceutical technology centres in Belgium, Denmark, Switzerland, the UK, Singapore, and USA provide global technical support and know-how to the pharmaceutical industry. These centres

of excellence give customers access to a range of test facilities and expert teams with technical and process know-how. Our teams work closely with our customers to optimise processes and evaluate their products, enabling them to achieve their process and production goals.




Contracting Profitable Experience

A world leader in supplying pharmaceutical equipment, GEA Pharma Systems offers manufacturers all over the world the opportunity to enter into a profitable partnership for development and contract. GPS combine advanced in-house technology with a thorough

understanding of the pharmaceutical industry to help customers maximize their development results.



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