



# Continuous Liner Systems

This easy-to-use system has been proven effective in containing active pharmaceutical ingredients API's and other hazardous compounds to assure a safe and effective transfer of powders - an operational requirement that cannot be achieved with a standard drum liner.

## BENEFITS

- Contained processing to protect the operators
- GMP processing in a completely closed operation to protect the product
- Single person operations
- Pre-loaded liner material minimizes processing time
- Easy instillation of a new continuous liner pack without the risk of breaking containment
- Significant reduction in cleaning time, waste, and validation expenses

The system is available in the following sizes:

PACK DIAMETER	PACK LENGTH	NUMBER OF DRUMS PER PACK*
14"	30'	6
23"	50'	10
	100'	20
	150'	30

\*assumes 5' of liner per drum to accommodate drum height and crimping. Actual usage will depend on the drum height.



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## Materials

ArmorFlex® is ILC Dover's proprietary family of films. These films pass incendivity testing and are designed and manufactured using FDA & EU compliant materials.

## Continuous Liner Hardware Kit Components

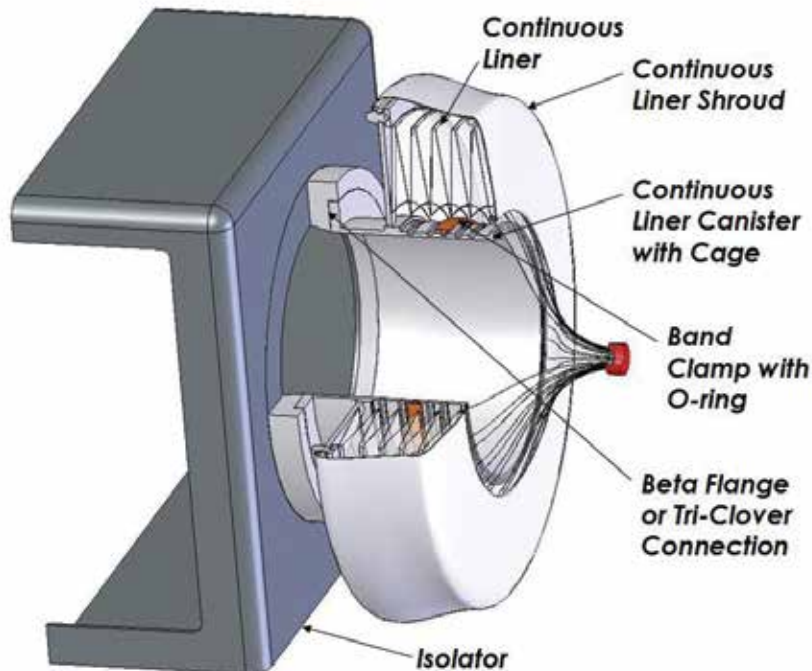
The Continuous Liner Kit includes:

- Canister
- Cage
- Shroud
- Pack Protector
- Band Clamp
- Sanitary Clamp and Gasket
- FlexLoc™ Clamp

The canister will attach to the vessel using a transition adapter. The transition adapter has a nitrogen purge/vent to discharge into an inert atmosphere (if required). Continuous Liner sold separately

## Continuous Bag-in/Bag-out System

The system can be supplied with an alpha/beta port interface to allow attachment to an isolator as depicted in the drawing. This allows the contained removal of product containers, samples, or waste from the isolator.



## Continuous Liner Process Steps:

The basic steps for operating this easy to use system are shown below.



Versatile hardware easily mounts to vessel discharge port



Continuous liner pack is installed



Sleeve is pulled into drum and filled



Unique DoverPac® crimping system is used to separate filled drum



Next sleeve is pulled into drum

## ILC Dover Crimps:

ILC Dover crimps have been designed and tested to compress standard diameter liners made with ArmorFlex® film



Load crimp into installation tool



Position crimp



Squeeze tool until crimps are engaged—then release tool



Cut and separate

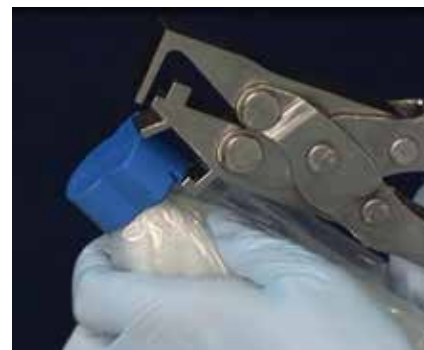


Install crimp cap on crimp body

## Crimp Separation Kit

The 14" and 23" crimp separation kit is used to separate the filled drum from the unused pack. The 14" and 23" Crimp Separation (start-up) Kit includes:

- 200 Crimps
- 1 CrimpLoc™ tool1 Cutter
- 100 Cable Ties (7" Nylon)
- 1 User's Manual



Additional spare items can be ordered separately by their individual model/part numbers.

The crimps have been designed and tested to compress the standard 14" and 23" diameter liners made with ArmorFlex® film. Use on any other system will preclude the crimps from closing correctly, which could result in operator and product exposures.

The hand tool applies two crimps at once. The cutter is then used to cut between the two crimps, and the cap is slid onto the closed crimp body.

## FlexLoc™ Clamp

The FlexLoc clamp is used to secure the neck of the liner to the canister. Construction of the molded clamp is of FDA compliant elastomer with integrated stainless steel band clamp. The clamp has a molded ridge along one surface to help install it in the correct orientation.



FlexLoc Clamp

The FlexLoc functions to prevent powder from going between the inside of the liner and the outside of the canister to minimize cleaning operations. The clamp is designed to operate in the offloading and the charging operations.

## Containment Levels

While specific powders react differently due to their particle size, customer testing has shown that these systems are capable of providing containment levels to below  $1 \mu\text{g}/\text{m}^3$  in applications around the world.

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## Continuous Liners

DIAMETER (IN)	LENGTH (FT)	AF114	AF110
14"	30'	CL14-030-114	CL14-030-110
23"	50'	CL23-050-114	CL23-050-110
	100'	CL23-100-114	CL23-100-110
	150'	CL23-150-114	CL23-150-110

## Continuous Liner Hardware Kits

PACK DIAMETER (IN)	PACK LENGTH (FT)	PART NUMBER
14"	30'	CL14-030-HWKIT
23"	50'	CL23-050-HWKIT
	100'	CL23-100-HWKIT
	150'	CL23-150-HWKIT

## Crimploc Kits

PACK DIAMETER	TYPE	PART NUMBER
Crimp Kit 14"	30'	HW10065-01
Crimp Kit 23"	50'	HW10066-01
CrimpLoc Tool Heads	Red/Yellow	HW10068-01
CrimpLoc Tool Heads	Blue	HW10069-01
Crimp Removal Tool		HW6636-02



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