



Home of Containment Solutions



Continuous Liner System CLS / CLCC

Containment-Level $\leq$ OEB 5 ($<1\mu\text{g}/\text{m}^3$)

LUGAIA
Containment Solutions



Continuous Liner System

Continuous Liner / Liner Carrier

The **Lugaia Continuous Liner Systems** prove themselves strongly when it comes to the safety of the staff and protection of your product. Axial folding enables film lengths of up to 80 meters. Fold height and foil length are depending on the film thickness.

On request, Lugaia also produces special CLS liner sizes from customer-specific foils.



The advantages of the Continuous Liner:

- High product and personal protection in the OEB 5 (<1µg/m³) Containment-Level
- Easy handling
- Customer customizable foil material
- Up to 80 meters per unit
- Less personal protection required
- Reduced or no cleaning of the environment
- Maximum film capacity in the smallest of spaces
- Different diameters and folding heights available
- Foil thickness of 50-150 µm
- High quality / manufactured in the ISO clean room

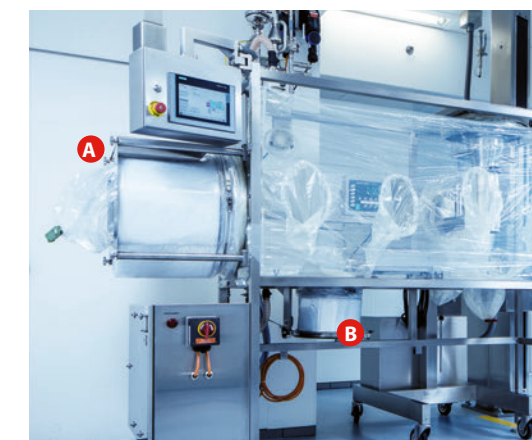
Continuous Liner System

Continuous Liner / Liner Carrier

The Liner Carrier System is used wherever endless liner is attached to a plant or an isolator system which needs to be installed as a foil lock. The foil package is placed on the carrier tube that is sealed with an O-ring and also pressed off and secured with an O-ring clamping ring. The connection of the Liner Carrier is individually adapted to the interface of the system, for example through TriClamp or flange connection.

Lugaia provides options to suit various needs. We offer standard executions for basic applications at lower costs, as well as continuous liner systems starting from CLS 500 in a vertical design. These systems come with a mounting aid, facilitating easy installation even for larger and heavier liner units by a single person. Another advantage is the ability to pre-load, simplifying workflow and boosting efficiency right from the start.

Application example:



A CLS horizontal waste port

B CLS vertical product port

Continuous Liner as Primary or Secondary Packaging

Folding technique:

Thanks to a special axial fold made from tubular foil, the Continuous Liner allows packaging in different manufactured sizes. With this folding process, it is possible to fold a maximum foil length (up to 80 m) into the smallest space available. This decreases the frequency for needed changes of the Continuous Liner packaging which saves time and costs.

Custom film material:

Lugaia offers the opportunity for Continuous Liners to be manufactured from a customized packaging foil material. The Continuous Liner can be used for readily validated applications.

By default, depending on the application, the Continuous Liners are made of a pure or antistatic LPDE.

Clean room assembly:

The best tailored and quality guaranteed processes for our customers are available in 3 Continuous Liner clean room classes: ISO 5, ISO 7 and ISO 8.

High containment solution:

For sealing and separating, the Continuous Liner will be using the Lugaia patented SafeSeal Closure System. Whereby an OEB 5 (<1µg/m³) Containment-Level can be guaranteed.

The possible uses:

- Pack-off Stations
- Packaging of API's (Active Pharmaceutical Ingredients) and toxic and highly reactive products
- Isolator and clean room application (Foil lock)
- Primary packaging
- Waste locks
- Material locks
- Sampling

Scope of Delivery

CLS standard sizes (p. 4):



Equipment:

- 1 Liner carrier
- 2 Liner unit
- 3 O-ring and clamping ring

Optional

- 4 SafeSeal Premium Toolset or SafeSeal DuoPro
- 5 SafeSeal crimp
- 6 SafeSeal opener

CLS with mounting aid (p. 5):

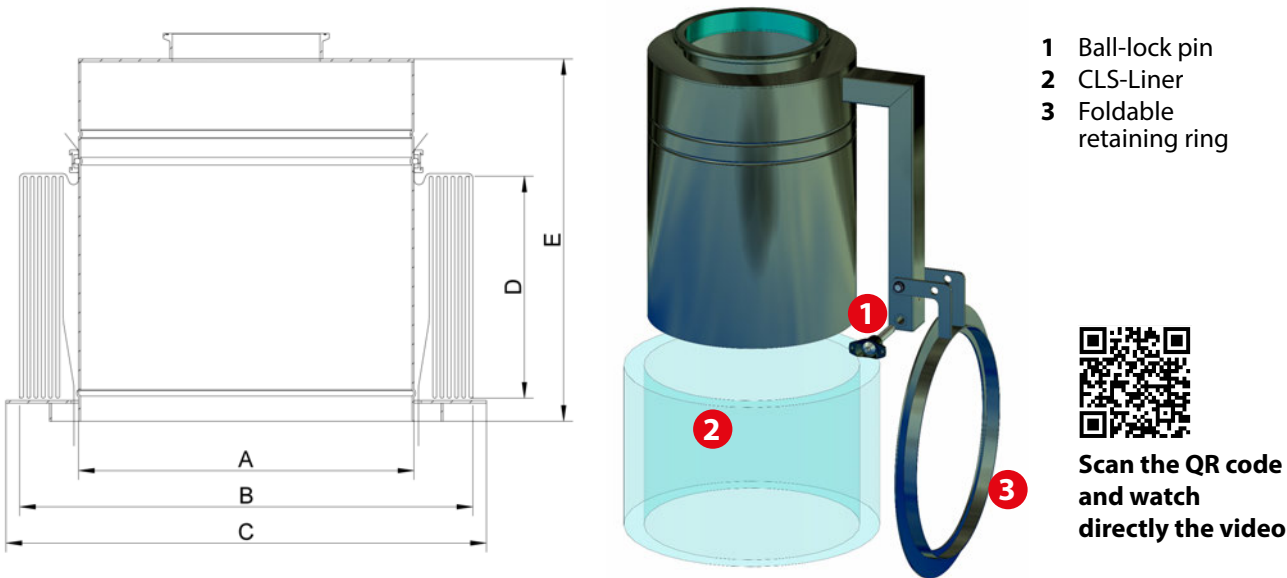


Equipment:

- 1 Liner carrier (optional available with roll-out seal)
- 2 Liner unit with O-ring and clamping ring
- 3 Mounting ring
- 4 Retaining ring
- 5 Placement basket

Continuous Liner System

CLS Standard Sizes



CLS Continuous Liner Types

Corresponding Liner Carrier Types

Type	B= Foil diameter (mm)	D= possible Liner heights (mm)	A= Tube diameter (mm)	C= Holder diameter (mm)	E= Liner Carrier construction height (mm)
CLS-300	190	100/150/300	115	200	Liner height + approx. 150 mm
CLS-400	250	100/150/300	200	270	
CLS-500	320	170/250/400	220	350	
CLS-600	380	170/250/400	300	410	
CLS-700	450	170/250/400	350	480	
CLS-800	500	170/250/400	370	530	
CLS-910	580	170/250/400	450	610	
CLS-970	620	170/250/400	500	650	
CLS-1100	700	170/250/400	550	730	

The table values are provided as guidelines and may vary depending on the specific application. Special configurations available on request.

Equipping the CLS Continuous Liner Carrier

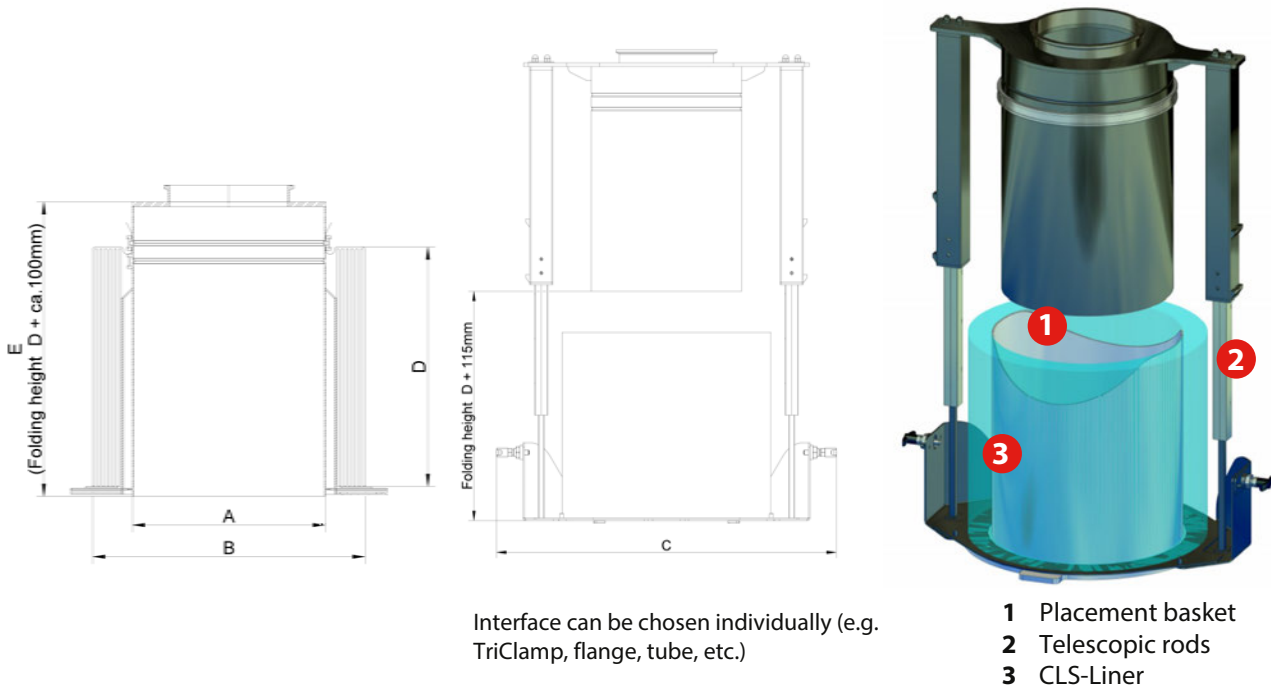


Liner carrier getting prepared for loading

Continuous liner fully loaded and ready for filling

Continuous Liner System

Mounting Aid



CLS Continuous Liner Types

Corresponding Liner Carrier Types

Type	B= Foil diameter (mm)	D= possible Liner heights (mm)	A= Tube diameter (mm)	C= Holder diameter (mm)	E= Liner height + ca 100 (mm)
CLS-500	320	170/250/400	220	620	Liner height + approx. 100 mm
CLS-600	380	170/250/400	270	680	
CLS-700	450	170/250/400	324	750	
CLS-800	500	170/250/400	330	800	
CLS-910	580	170/250/400	454	900	
CLS-970	620	170/250/400	474	930	
CLS-1100	700	170/250/400	500	1000	

The table values are provided as guidelines and may vary depending on the specific application. Special configurations available on request.

Equipping the CLS Continuous Liner Carrier with mounting aid



Liner carrier with mounting aid getting prepared for loading

Continuous liner fully loaded and ready for filling

Continuous Liner System

Continuous Liner

Continuous Liner Carrier System from Lugaia – effective and popular

Clean room production ISO 5, ISO 7 and ISO 8

Quality is the top priority in the manufacturing process of our products. Our quality management system provides credentials for this with certifications according to ISO9001: 2015 and ISO15378: 2017 (primary packaging for pharmaceutical applications). In our class ISO 5, ISO 7 and ISO 8 clean rooms, we use cutting-edge technology for processing and welding of foils according to validated processes on qualified systems.



The Continuous Liner



Foil variants:

- PE with antistatic characteristics
- Pure PE for primary packaging
- PE with antistatic or conductive grid printing
- Barrier foils
- Custom foils

FDA, EP and USP approved

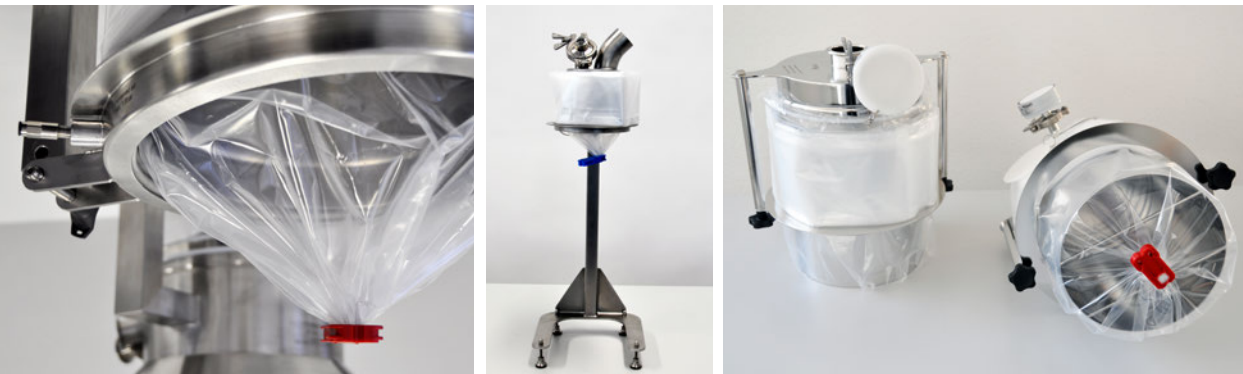
Continuous Liner System

Customized Special Solutions

Customized liner carrier systems

According to your wishes and specifications

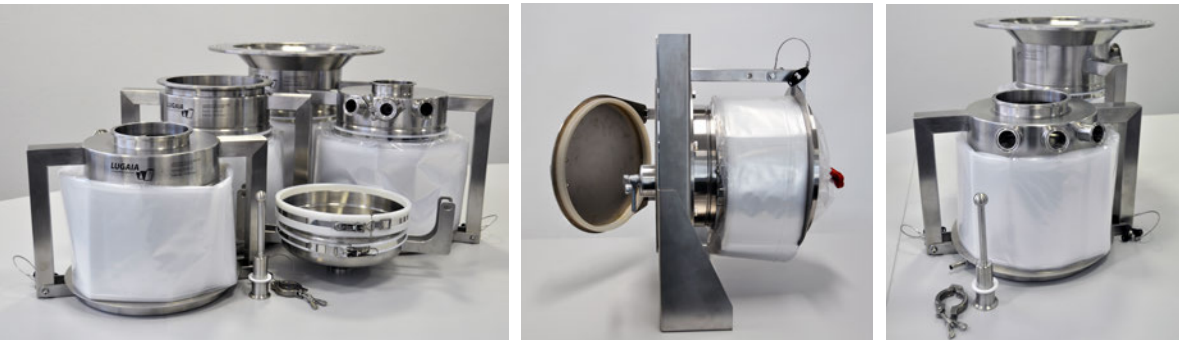
In addition to standardized carriers we also design customized solutions specifically to suit your system. For example liner carrier systems with customer-specific connection, out of special material, with dedusting connection, with inflatable seal, with various sizes etc.



Liner carrier with inflation hose for sealing

Liner carrier for tablet discharge

Liner carrier for contamination-free discharge from tablet press



Various liner carriers with integrated washing system

Continuous Liner System as a clean room lock

Customized liner carrier with dedusting connection

Washing option



Liner carrier with washing bell and cleaning sleeves

Key Features:

- Enhance your cleaning efficiency with our washing option for liner carriers
- Our system facilitates both internal and external cleaning of the CLS system at the end of your processes
- Benefit from a specialized cleaning sleeve designed for closed dismantling, ensuring thorough cleanliness
- The inclusion of an integrated spray ball guarantees effective cleaning, reaching all areas
- Prevent residue buildup with our drainage system, promoting optimal hygiene standards
- Streamline your operations with our combined mounting aid, simplifying installation while ensuring cleanliness every step of the way

Continuous Liner System

CLCC Continuous Film Carrier

CLCC Continuous Liner Carrier (with RTP Beta)

Rapid transfer port systems for high containment



Scan the QR code and watch directly the video



Our Continuous Liner Carrier combined with the RTP Beta-System makes it possible for inward and outward transfers at RTP Alpha interfaces. The Continuous Liner Types CLS-300-910 can be combined with the RTP Beta-Ports 105-460.

The advantages of the CLCC Carrier:

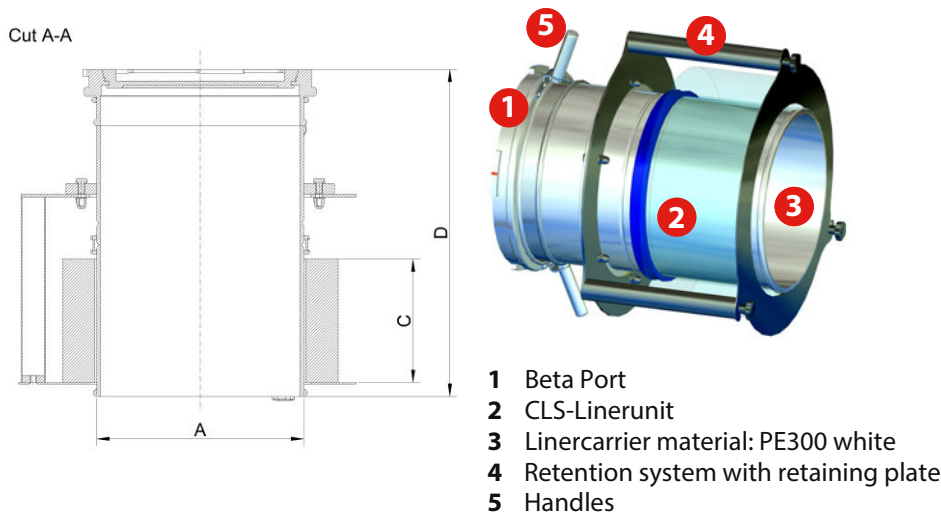
- Light design through use of plastic
- Continuous Liners are easily assembled
- Custom design
- Tested RTP connection system

Continuous Liner System

CLCC Sizes and Scope of Delivery

The Standard Sizes

- Depending on the type of Continuous Liner, fold heights between 150-400 mm can be chosen.
- Design and dimension can be manufactured according to customer specifications.
- Brand of Beta-Port can be selected.

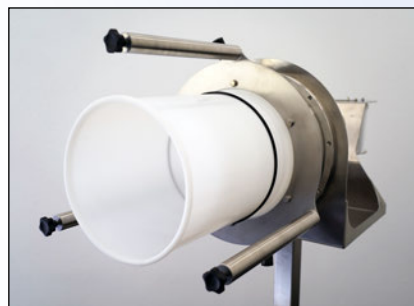


Type	Liner size	A=pipe dia+ meter outside (mm)	OD=retention qwqrc k (mm)	OD=handles (m k ')	A ; q r _ l b _ p b j g l c p f c g e f r q (m k)	B ; r m r _ j f c g e f r
CLCC-105	CLS-300	113	0 . .	05 .	100/150/300	Dim. C + 150mm
CLCC-190	CLS-400	0 . .	130	412	100/150/300	Dim. C + 250mm
CLCC-270	CLS-600	063	300	565	170/250/400	Dim. C + 250mm
CLCC-350	CLS-700	152	356	584	170/250/400	Dim. C + 250mm
CLCC-460	CLS-910	252	462	760	170/250/400	Dim. C + 250mm

Equipping the CLCC Continuous Liner Carrier



Remove the retaining plate



Fit the O-ring



Put on the Continuous Liner



Seal the Continuous Liner on the carrier tube



Fit the retaining plate



Close the Continuous Liner with SafeSeal

Continuous Liner Carriers form the interface between the outlet and the Continuous Liner Package and guarantee appropriate handling and protection. There are specific requirements for each application that we have taken into account when designing our standard Liner Carriers. This way we can achieve the highest possible occupational safety and ensure user-friendliness.



Scope of Delivery:

- 1 Liner Carrier
- 2 Liners
- 3 O-ring and clamping ring

Optional

- 4 SafeSeal Premium Toolset
- 5 SafeSeal crimp
- 6 SafeSeal openers



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Our product overview:

- Continuous Liner System CLS / CLCC
- SafeSeal Closure System
- TransferBag System
- SafeFlex Isolator System

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