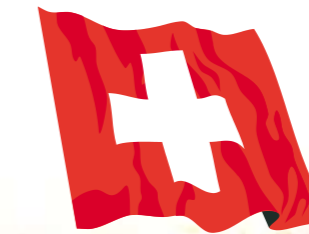




Foto Matterhorn: Kurt Müller, Gestaltung: www.rauchbauer.de



*Containment solutions*

## Containment – ideal protection against contamination of employees and product

The times when it was enough to develop modern dust extraction and dust masks, are long gone.

Effective »**containment solutions**« are the tasks of the future. In the field of pharmaceuticals and biotechnology, increasingly critical substances are on the rise. With today's benchmarks in science, especially in the field of disease control, highly active substances and ingredients are employed.

The disadvantage: The powders and dusts which are used now are becoming increasingly toxic. With Swiss precision and advanced technology, Lugaia Containment Solutions AG accepts this challenge and manufactures flexible packaging and transfer solutions, specifically for individually developed and interlinked manufacturing equipment, for the protection of your employees and products.



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Swiss precision and advanced technology for innovative and individual product and personnel protection

Lugaia offers its customers different security concepts to maintain the required OEL levels

Containment-action	OEL	OEB	toxic effect
Isolator-system	< 200 ng/m <sup>3</sup>	6	extremely dangerous
	< 1 µg/m <sup>3</sup>	5	very dangerous
Transfer and protective film-systems	1-10 µg/m <sup>3</sup>	4	dangerous
	10-100 µg/m <sup>3</sup>	3	not very dangerous
bag systems with local extraction	100-1000 µg/m <sup>3</sup>	2	almost dangerous
	> 1000 µg/m <sup>3</sup>	1	harmless

OEL = Occupational Exposure Limit, OEB = Occupational Exposure Band

[www.lugaia.com](http://www.lugaia.com)



## Innovative solutions and advanced technology



We focus on the life science, pharmaceuticals and bio-technology.

Lugaia progressed the development of complete containment solutions – from an idea to an ergonomic study, to a concept, all the way to build a complex isolator system.

Our infrastructure enables us to offer standardized products in various quality classes and also to develop customized solutions of highest quality and integrate them to local facilities.

Standard products are continuously improved to satisfy our customers requirements. The vast in-house experience in containment and sterile technology, coupled with the continuous demands from various industries in our market is driving our innovation process.

The predicate »Made in Switzerland« has always been synonymous with precision, quality and reliability.

**Quality management systems according to GMP, pharmaceutical and ISO standards**

**Cleanroom infrastructure ISO 5 / ISO 7**

## Containment solutions – Product-Overview



### CLL – Continuous Liner System

- High product and personnel protection
- Easy handling
- Film material supplied to customer specifications
- Optionally, up to 80 meters per unit

#### Application areas:

#### Discharge facilities

- Discharging of API (Active Pharmaceutical Ingredients), toxic and highly reactive products

#### Isolator and cleanroom applications

- Primarily medium pack
- Waste-port
- Material transfer
- Sampling

### LinerCarrier-systems

- Suitable for all CLL-standard sizes
- Connection system selectable (eg. Tri Clamp, flange ...)

### SafeSeal-closure system

(patented)

#### ... Simply brilliant and brilliantly simple!

The manual closure system of Lugaia consisting of clip, crimping and cutting tool, is the affordable solution to seal continuous liners. The user benefits from low investment and maintenance costs.

The SafeSeal-continuous liner locking system impresses with:

- OEB Level 5 (guaranteed)
- Easy handling
- High working safety
- Universal application (3 sizes)
- Low costs
- Easy opening of the lock with special tool (SafeSeal-Opener)



SafePortBag TransferBag

Contamination-free transfer of small quantities by means of film bags

#### SafeportBag

- Cost effective one way version safe transfer in OEL 5 (<math><1\mu\text{g pro m}^3</math> Containment Level)
- Clean room production according to Guidelines with USP / EP certificate
- Standard versions for pharmaceutical and Chemistry Version available
- Special versions with sampling sleeve and customized films available
- Content variable from 5-40 liters available
- No product loss during emptying

### SafeFlex-isolators

Our isolators are conceptualized, custom made and are suitable for dispensing, sampling and feed processes.

- SafeFlex film with high tear and perforation resistance
- Can be used in applications with negative or positive pressure
- Charging and discharging by means of continuous liners system
- Docking by means of double O-ring technology
- Very high containment level (OEL <math><1\mu\text{g pro m}^3</math>)
- Computerized ventilation technology

### Individual special solutions

- Always adapted to your specific needs
- Local containment solutions for sampling, filter change, dismantling
- Local enclosures for cleaning and maintenance purposes