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Z-LAB - Filling and sealing of small batches in the laboratory

Compact and reliable processing - even in the isolator

## FLEXIBILITY

Thanks to a high standard of fully automatic filling and capping technology, validity and reproducibility are ensured at all times, guaranteeing bubble-free filling.

### Sophisticated machine concept

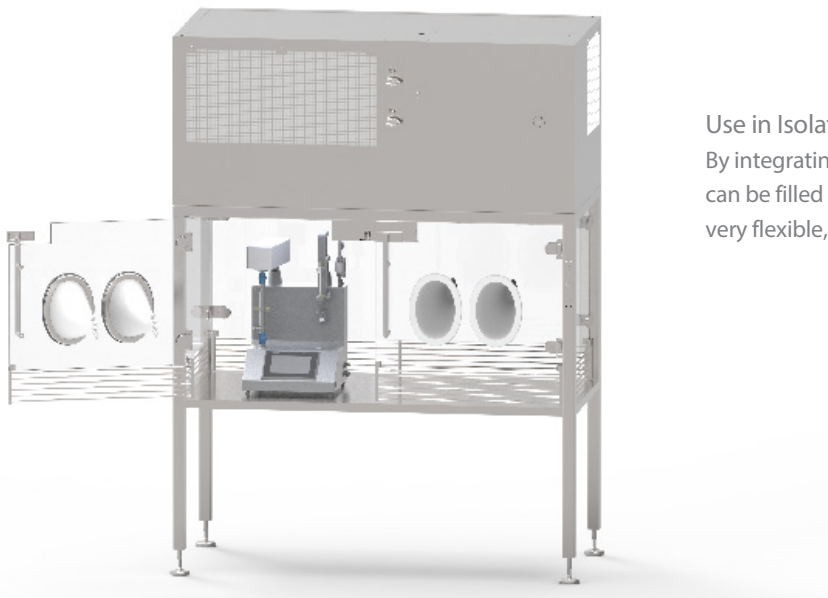
- for many different container types (with holding device for non-standing containers)
- 100 % integrated electronics without additional control cabinet
- pump technology adapted to liquids and gels
- servo motor drive
- production capacity of up to 800 pcs/h
- fast and tool-free format and product changeover
- Tool-free changeover from Z-CLOSE to Z-FILL for small batches
- Synchronized axis guidance for maximum repeatability
- Operation via 9 inch touch screen
- Temperature-monitored electronics
- Sterile filter with differential pressure monitoring for product and component protection against contamination

### Quality assurance

- Storage of recipe and batch data
- meets FDA and cGMP requirements
- meets the requirements of ISO 5
- optional: VHP decontamination
- optional: production in isolator

### optionally with vacuum

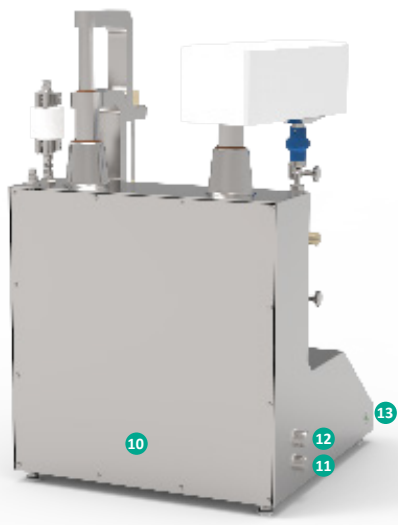
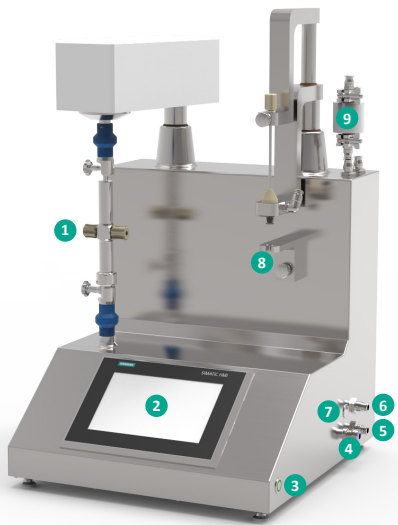
- adjustable and regulating vacuum process via motion control
- three sealing concepts can be realized (mechanical sealing, vacuum sealing, gentle vacuum sealing)



### Use in Isolator

By integrating the Z-Lab family into an isolator, liquids and gels can be filled and sealed into a wide variety of containers in a very flexible, efficient and GMP-compliant manner.

## LAYOUT



- 1 Product connection
- 2 HMI
- 3 2-hand button
- 4 Mains connection
- 5 Vacuum connection
- 6 Vacuum air removal
- 7 On/Off switch
- 8 Filling position
- 9 Sterile filter
- 10 Electrical components
- 11 RJ45 connector
- 12 USB port
- 13 2-hand button

## FILL



### Z-LAB Fill with rotary pump

Simple and precise filling of all types of stationary containers. A holding device is used for non-rigid containers such as syringes, cartridges and tubes. The recipe data is stored in the system control. All batch data can also be saved and/or printed out for documentation and reproduction purposes.

#### Equipment

- Valveless rotary pump
- Filling needle movement
- Automatic readjustment of the dosing quantity
- Two-hand operation



### Z-LAB Fill with peristaltic pump

Simple and precise filling of all types of stationary containers. A holding device is used for non-rigid containers such as syringes, cartridges and tubes. The recipe data is stored in the system control. All batch data can also be saved and/or printed out for documentation and reproduction purposes.

#### Equipment:

- Single-hose peristaltic pump
- Filling needle movement
- Automatic readjustment of the dosing quantity
- Two-hand operation

## CLOSE



### Z-LAB Close

Simple and automatic closing with stoppers of all types of stable containers. For non-rigid containers, such as syringes, cartridges and tubes, a holding device is used.

- Individually adjustable tamping depth
- Individually adjustable indentation speed
- Two-hand operation

## CRIMP



### Z-LAB Crimp

Simple and automatic closing of vials and cartridges with crimp or flip-off caps. A holding device is used for non-rigid containers.

- Central crimp pressure adjustment
- Individually adjustable crimping speed
- Individually adjustable stroke of the crimping head
- Two-hand operation