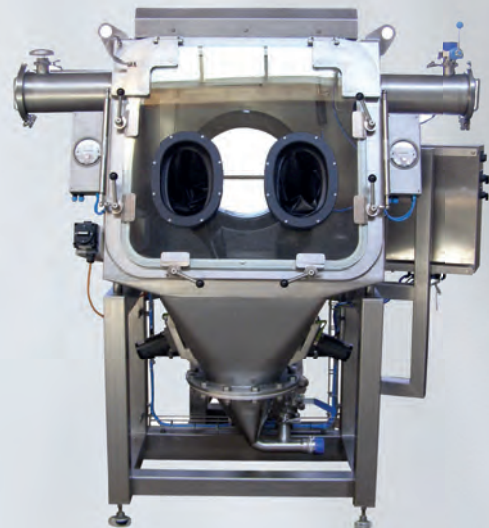


WE CARE.

HECHT
technologie

DISCHARGING DRUMS





Discharging drums

Check list for quotation

CHECK LIST

PERSONAL DATA

Company: _____

Street: _____

Postal Code / City: _____

Project: _____

Contact person: _____

E-mail: _____

Phone: _____

Fax: _____



RANGE OF APPLICATION

Chemical industry Food industry Pharmaceutical industry

API manufacturer _____

PRODUCT TO BE DISCHARGED

PRODUCT DATA

Product designation: _____ Temperature [°C]: _____

Bulk density [kg/l]: _____ Particle size [mm or "]: _____

Moisture content [% H₂O]: _____ Angle of repose: _____

PRODUCT CHARACTERISTICS

powdery sticky hardened flushing conductive

flaked caking flammable (MIE _____) poor-flowing fragile

free-flowing hygroscopic reacts with moisture pellet-shaped needle-shaped

dusty lumpy (big) reacts with oxygen crumbly (small)

fluidizing corrosive electrostatic charging graining: _____

abrasive bridging toxic (OEL _____) _____

AMBIENT CONDITIONS

Room height (lower edge ceiling or tubing) [mm or "]: _____

Compressed air supply [bar]: _____ Power supply: _____ [Volt] _____ [ph] _____ [Hz]

Ex-proof: yes no Ex-Zone: _____ Protection class: IP _____

Material of product touching parts: _____ Downstream system?: _____

Material of non-product touching parts: _____ Surfaces: _____

Is a dedusting unit available? yes no



Discharging drums

Check list for quotation

CHECK LIST

DISCHARGE PROCESS

With tipping device



With suction lance

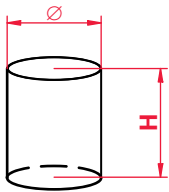


SUPPLY VIA

Roller conveyor: yes no

DRUM SIZE / WEIGHT / CAPACITY / DIMENSIONS

Drum



With inliner: yes no

Number of inliners: _____

Drum Ø [mm]: _____

Inliner Ø [mm]: _____

Height **H** [mm]: _____

Max. weight of drum [kg]: _____

Discharge capacity [drum/h]: _____

Food/pharmaceutical sector? yes no

(GMP-compliant version)

WEIGHING SYSTEM (LOSS IN WEIGHT)

Use: yes no

Weighing range [kg]: _____

Accuracy [+/-]: _____

CONVEYING AFTER DISCHARGING

Conveying: yes no mechanical pneumatic

Conveying path [m]: horizontal: _____

vertical: _____

Conveying capacity: [kg/batch]: _____

[kg/h]: _____

Operating time: [h/day]: _____

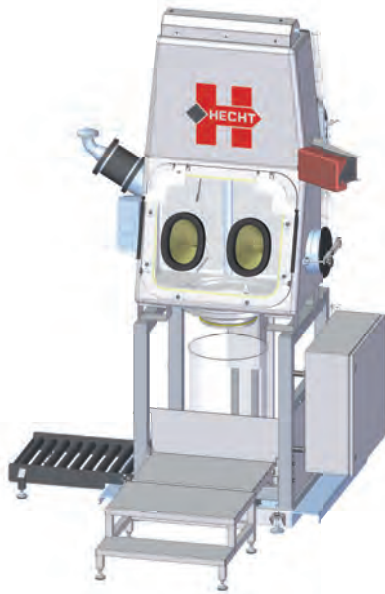


Discharging drums

Drum discharge station with lance

HAND
OUT

DESCRIPTION



The HECHT **containment drum discharge station with lance type CFE-L** is used for contamination-free discharging of drums with inner liner up to OEB 5.

To ensure operator and product protection, the products supplied in drums are additionally packed in film also referred to as liner.

The product must be packed in at least one liner.

Discharging of drums using the suction lance is suitable in the case of limited space or weight-controlled removal of product.

HANDLING

In the case of loss-in-weight systems, the operator takes the drum via the roller conveyor directly underneath the glove box.

The drum is positioned by means of the lifting device.

Then the operator fixes the outer liner at the double O-ring port using a clamping ring. He removes the residues of the previous liner using the gloves and temporarily stores them in the glove box.

The drum is then pressed against the gasket at the bottom of the glove box and fixed using the lifting device. The inner liner (product liner) is opened, stabilized with a ring and sealed by means of an inflatable seal.

In order to stabilize the liner and facilitate discharging, the area between drum and outer liner is evacuated, preventing the liner from being sucked

in by the suction lance.

The drum is now connected, and the powder can be sucked out of the drum by means of a lance and vacuum. The linear guiding of the suction lance supports the easy handling during discharge. After the drum has been emptied, the residues of the previous liner can be disposed of in the drum. As soon as the outer liner has been loosened, the drum is closed by means of the double closing system as already described.

The empty drum can then be removed and a new cycle can be started.

AT A GLANCE



Accurate sucking out, with loss-in-weight option



Numerous options



Operator and product protection



Ergonomic working

ADVANTAGES

- ◆ Discharging up to OEB 5, OEL < 1µg/m³
- ◆ Monitoring of the product flow
- ◆ Product handling via gloves
- ◆ Contamination-free replacement of gloves
- ◆ Contamination-free connection via double O-ring technology
- ◆ Positioning und docking of the drum by the automatic lifting device

OPTIONS

- ◆ WIP (Washing in Place)
- ◆ Inerting
- ◆ Ex-version for zones inside 1/21; outside 2/22
- ◆ Full FDA compliance of the materials used
- ◆ Waste can be properly disposed of via a drum with liner
- ◆ Different surfaces and materials depending on the version selected, e.g. 1.4301 oder 1.4404

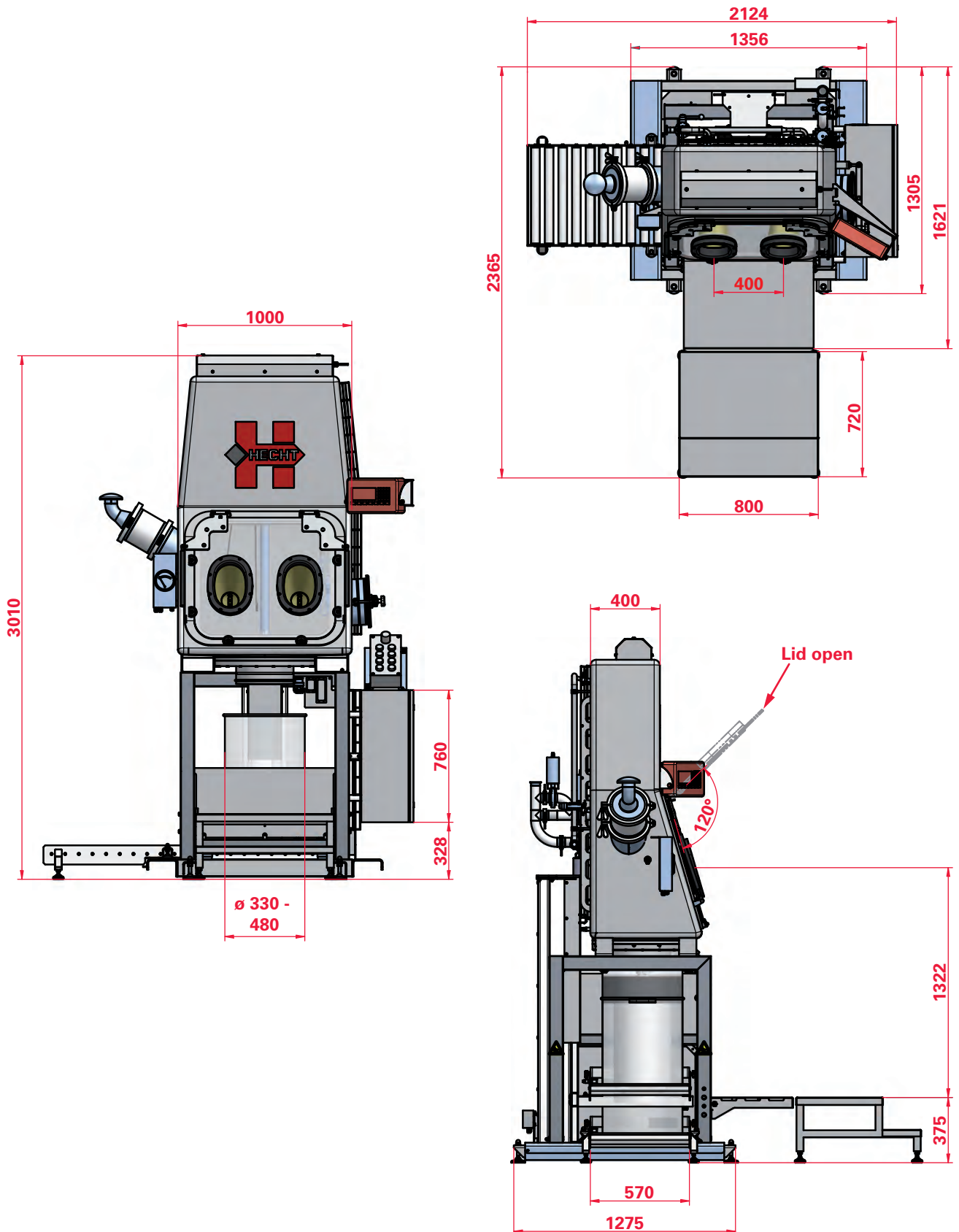


Discharging drums

Drum discharge station with lance

DIMEN-
SION
SHEET

STANDARD DIMENSIONS





Discharging drums

Drum discharge station with tipping device

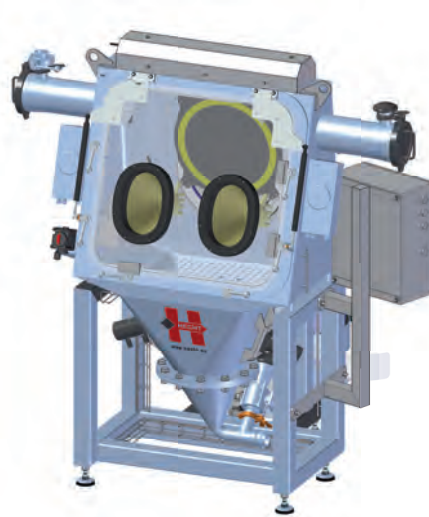
HAND
OUT

DESCRIPTION

The **containment drum discharge station with tipping device type CFE-K** from HECHT is used for low-contamination discharging of drums with inner liner up to OEB 5.

To ensure operator and product protection, the powder delivered in drums is additionally packed in a film also referred to as liner.

The product must be packed in at least one liner.



HANDLING

If the drum discharge station is equipped with a tipping device, the drum can be lifted via a special lifting device at the back of the glove box and docked to the connection port provided. In the initial position, the glove box is closed by a shower cap.

The operator fixes the outer liner at the double O-ring-port of the isolator over the shower cap.

Afterwards, the operator pulls the shower cap into the isolator using the gloves. Then he pulls the clamping ring to the outer groove of the isolator where the shower cap was before, and pushes the drum opening into the isolator.

Using the gloves, he opens the inner liner inside the isolator and empties the contents.

The bulk material is then taken to the next process step by means of gravity.

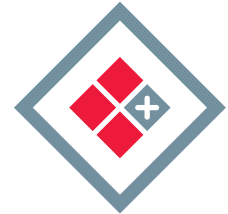
As an alternative, if desired, a suction shoe can be integrated at the outlet of the glove box for connection to a downstream vacuum conveying system.

After the content has been emptied, the liner is closed twice towards the drum and the isolator.

This double-closure technology ensures protection of both the isolator and the product against unwanted product escape (or product entry as well).

The cycle can then start again, and a new drum can be connected.

AT A GLANCE



Different versions available



Numerous options



Operator and product protection



Ergonomic design

ADVANTAGES

- ◆ Discharging up to OEB 5, OEL < 1µg/m³
- ◆ Monitoring of the product flow
- ◆ Product handling via gloves
- ◆ Contamination-free change of gloves
- ◆ Contamination-free connection by means of double O-ring technology
- ◆ Drum positioning and docking by means of hand pallet truck

OPTIONS

- ◆ WIP (Washing in Place)
- ◆ Nitrogen purging
- ◆ Ex-version for zones inside 1/21; outside 2/22
- ◆ Full FDA compliance of the materials used
- ◆ Passing out by means of optional empty sack disposal
- ◆ Different surfaces and materials depending on selected version, e.g. 1.4301 or 1.4404

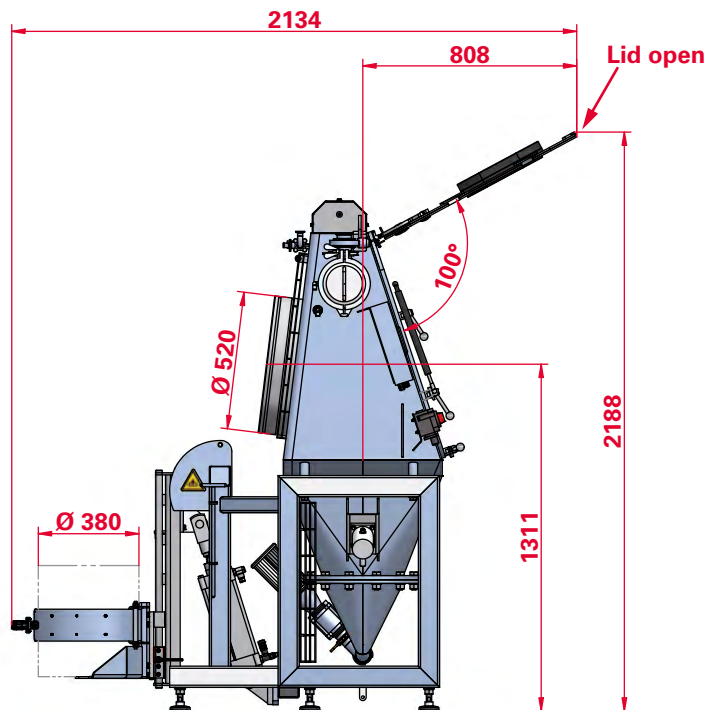
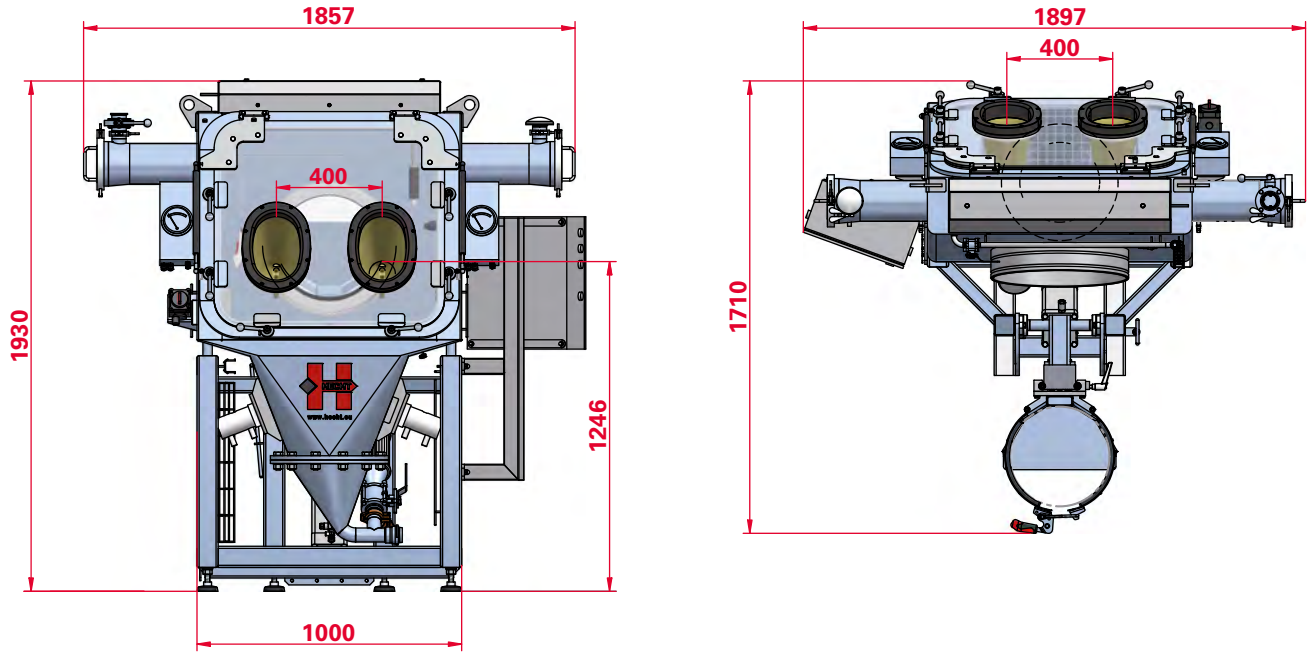


Discharging drums

Drum discharge station with tipping device

DIMEN-
SION
SHEET

STANDARD DIMENSIONS





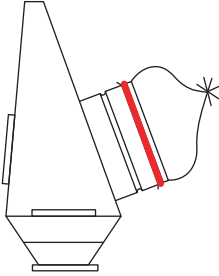
Discharging drums

Drum discharge unit

HANDLING

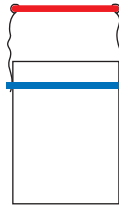
HANDLING

1



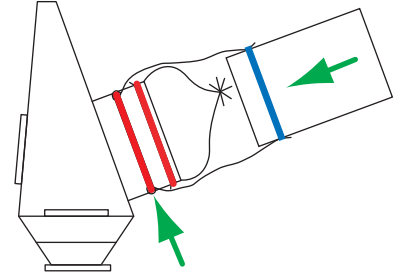
Initial position:
The o-ring port is closed
with shower cap.

2



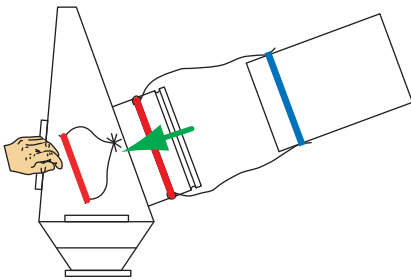
Fix a connecting liner with
clamping ring on the drum.

3



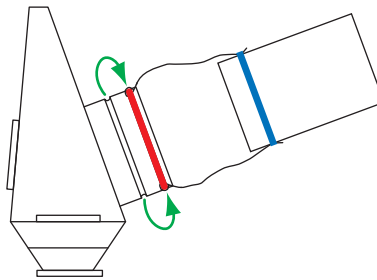
Fix the open side of the connecting
liner with the clamping ring
in the inner flute.

4



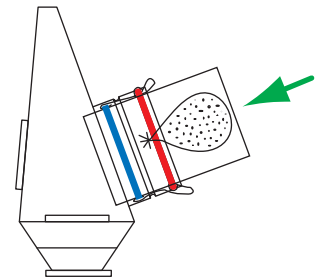
Remove the shower cap,
using the gloves.

5



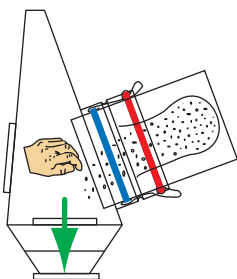
Move the clamping ring from
the inner to the outer flute.

6



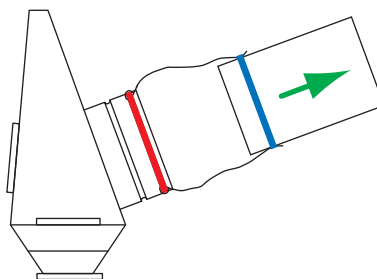
Move the drum inward.

7



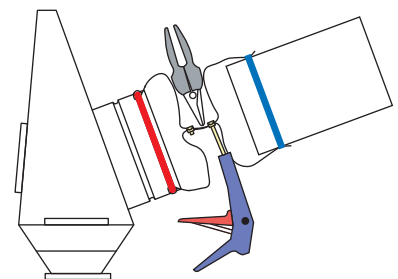
Open the sack inside the drum,
using the gloves and discharge it.

8



Move the drum outward.

9



Seal it two times and cut it
between the closures.

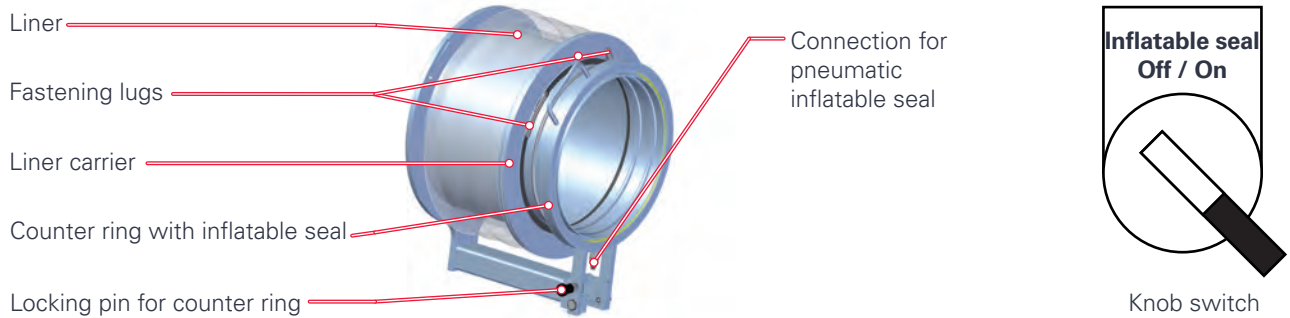


Discharging drums

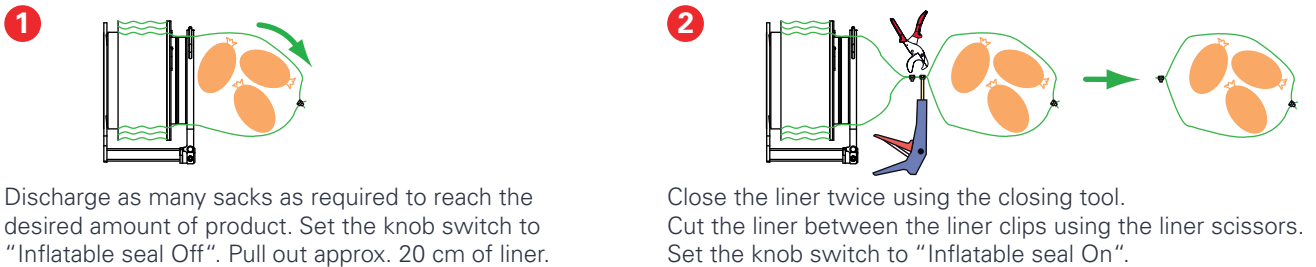
Transfer port - passing out sacks

**HAND
LING**

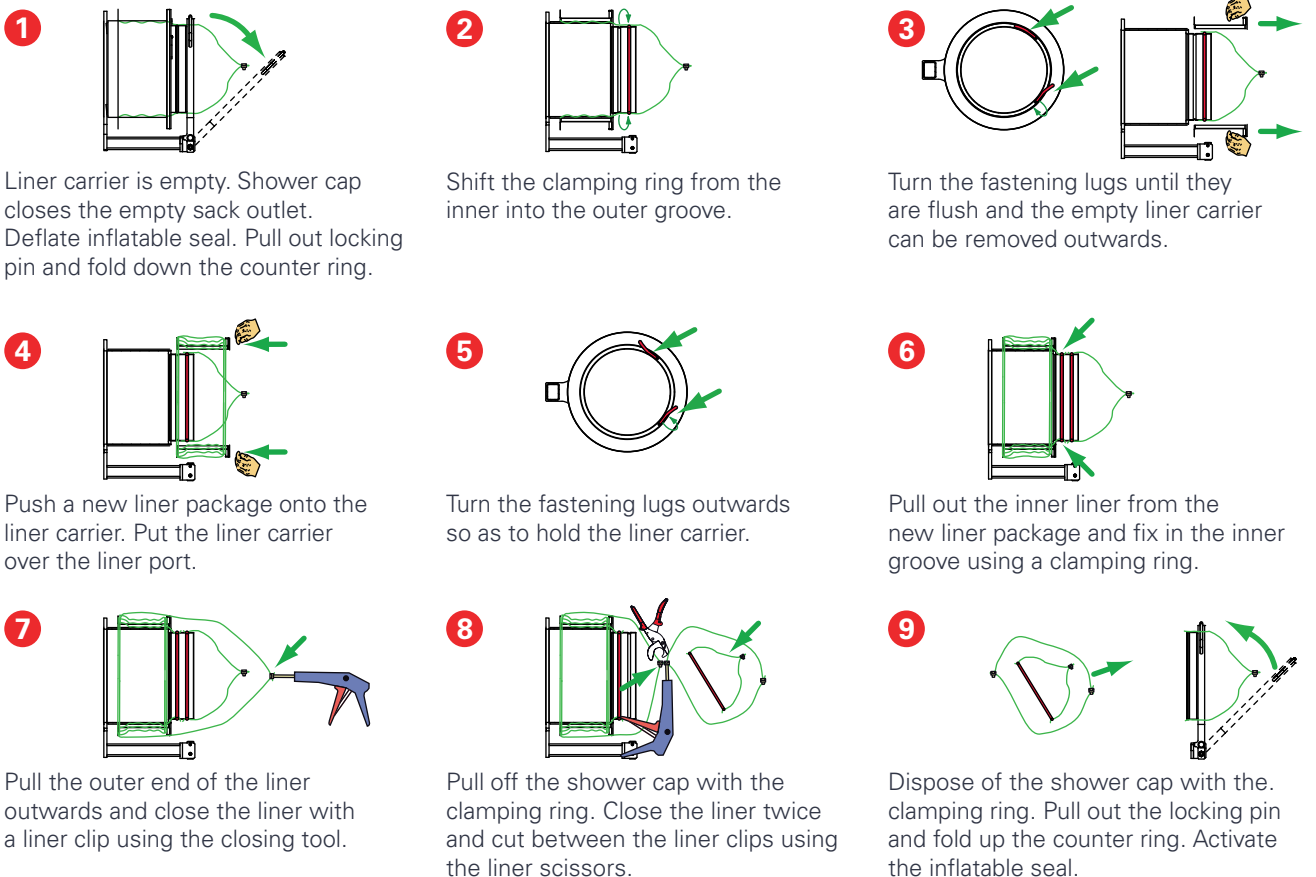
SETUP



PASSING OUT EMPTY SACKS

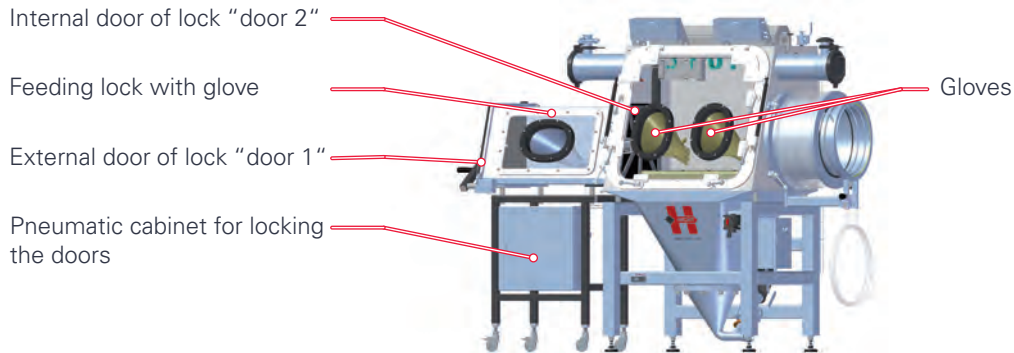


CHANGING THE LINER

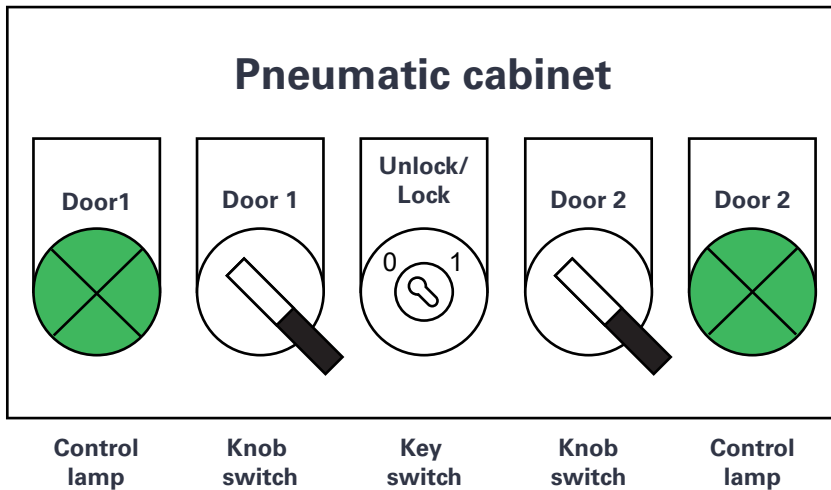




SETUP



BASIC SETTING



In the basic setting, door 1 and door 2 are closed and locked.

Both control lamps light green.

Lock = left-hand pushbutton

Unlock = right-hand pushbutton



Door 1 and door 2 are interlocked.



When the key switch is set to 1, both doors are unlocked.

OPERATION

1



Turn the knob switch "Door 1" to the right.

✓ Door 1 is unlocked.



✓ Control lamp goes out.



Discharging drums Lock Operation

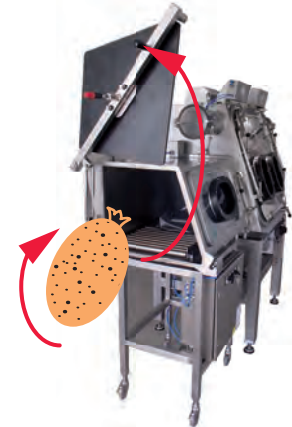
HAND
LING

OPERATION

2



Open the Destaco clamp and lift door 1 using the black handle. Push a sack onto the roller conveyor in the feeding lock.



3

Lower door 1 using the black handle. Lock door 1 using the Destaco clamp.



Turn the knob switch „Door 1“ to the left.

√ Door 1 is locked.



√ The control lamp lights green.

4



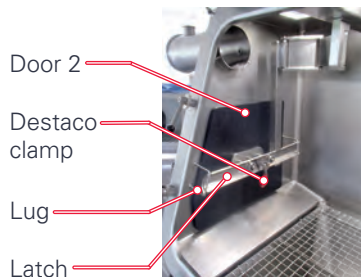
Turn the knob switch „Door 2“ to the right.

√ Door 2 is unlocked.



√ The control lamp goes out.

5



Reach into the gloves and open the Destaco clamps.

Remove the latch from the lugs and turn the door away towards the back.

Door 2 in opened position



6

Use the gloves to pull the sack into the glovebox.

Close door 2 by turning it towards the front again. Insert the latch into the lugs and close the door using the Destaco clamp.

Discharge the sack.



Door 2 is not locked. For discharging the next sack, door 2 must be locked at the pneumatic cabinet so that door 1 can be opened (interlock).