

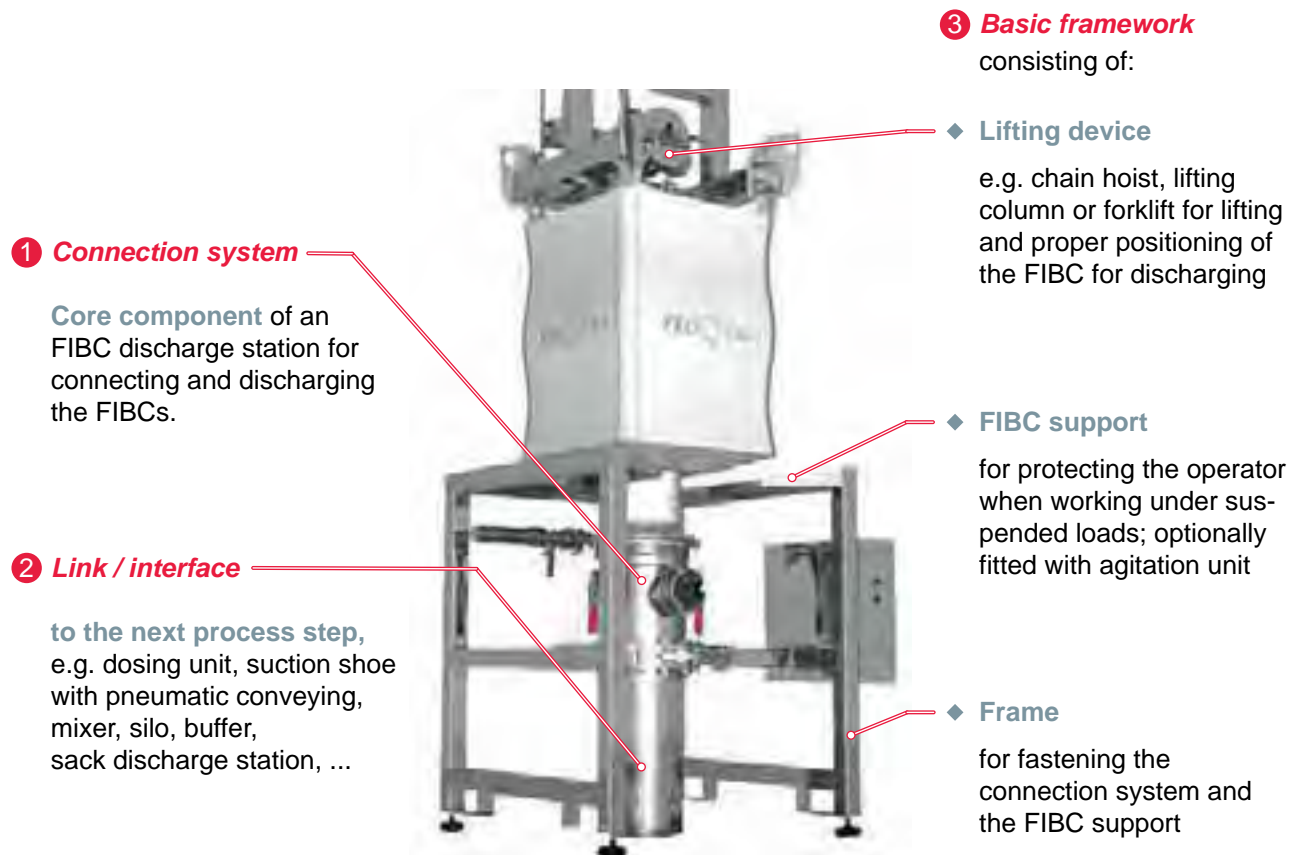
FIBC discharge stations by HECHT are used in particular in the chemical, pharmaceutical and food industries.

Powders, granules and other bulk solids are often transported and temporarily stored in FIBCs. Consequently, FIBC discharge stations are required for further processing.

With an experience of more than 30 years, HECHT is your competent and reliable partner for all tasks and questions as to the discharge of FIBCs.

SETUP

An FIBC discharge station mainly consists of **3 components**:



QUESTIONS?

When planning an FIBC discharge station, the operator should be aware of the following items:

- ◆ **Product:** free-flowing or poor-flowing?
- ◆ **Protection:** Product protection, operator protection, dust protection or no requirements?
- ◆ **Frequency of use of the station:** frequent or rather sporadic use?
- ◆ **Local conditions:** Storey, ceiling height, load capacity of floor and ceiling?
- ◆ Important assistance: **questionnaire**





Discharging FIBCs

Check list for quotation



CHECK LIST

Company name _____

Steet _____

City _____ Zip _____

PROJECT _____

Contact Person _____

Email _____

Phone _____

Fax _____



RANGE OF APPLICATION

- | | | |
|---|-------------------------------------|---|
| <input type="radio"/> Chemical industry | <input type="radio"/> Food industry | <input type="radio"/> Pharmaceutical industry |
| <input type="radio"/> API manufacturer | <input type="radio"/> _____ | |

PRODUCT TO BE DISCHARGED

PRODUCT DATA

Product name: _____ Temperature [°C]: _____

Bulk weight [kg/l]: _____ Grain size [mm]: _____

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

PRODUCT CHARACTERISTICS

- | | | |
|---|--|---|
| <input type="radio"/> powdery | <input type="radio"/> pellet-shaped | <input type="radio"/> graining |
| <input type="radio"/> flaked | <input type="radio"/> conductive | <input type="radio"/> needle-shaped |
| <input type="radio"/> free-flowing | <input type="radio"/> poor-flowing | <input type="radio"/> bridging |
| <input type="radio"/> dusty | <input type="radio"/> caking | <input type="radio"/> sticky |
| <input type="radio"/> fluidizing | <input type="radio"/> hygroscopic | <input type="radio"/> flushing |
| <input type="radio"/> hardened | <input type="radio"/> lumpy (big) | <input type="radio"/> crumbly (small) |
| <input type="radio"/> abrasive | <input type="radio"/> corrosive | <input type="radio"/> fragile |
| <input type="radio"/> flammable (MIE _____) | <input type="radio"/> electrostatic charging | <input type="radio"/> toxic (OEL _____) |
| <input type="radio"/> reacts with moisture | <input type="radio"/> reacts with oxygen | <input type="radio"/> _____ |

SURROUNDING CONDITIONS

Ceiling height (lower edge of ceiling or pipes) [mm]: _____

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

Material of product-touched parts: _____ Material of non product-touched parts: _____

Surfaces: _____

Downstream system?: _____

Ceiling: ☐ runway girder ☐ free standing portal unit ☐ _____

Is a dedusting unit available?: ☐ yes ☐ no

Explosion protection?: _____ Protection class: IP _____

Explosive area: ☐ yes ☐ no

Inside:

1/2

Outside:

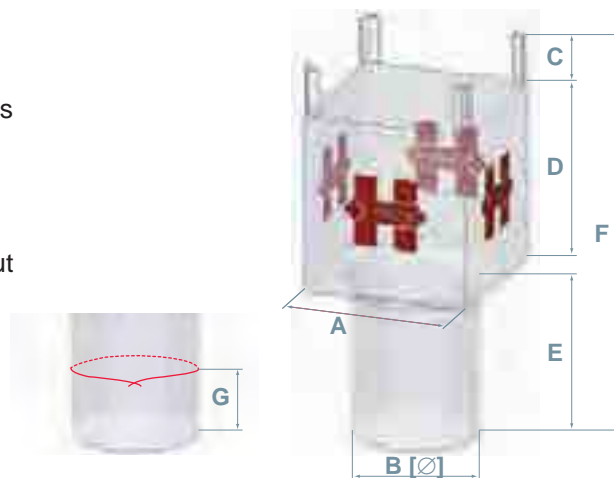
FIBCS

SUSPENSION SYSTEM

- ☐ 4 individual loops ☐ 2 sleeve loops

INNER LINER

- ☐ Inner liner ☐ with ☐ without
☐ Inner liner fixed in outer bag: ☐ yes ☐ no
☐ Customized inner liner: ☐ yes ☐ no
☐ Free tied-off length [mm] [G]: _____



WEIGHT / CAPACITY / DIMENSIONS

Max. filling weight [kg]: _____ Discharging capacity [FIBCs/h]: _____
 Dimensions [mm]: A _____ B _____ C _____ D _____ E _____ F _____

OPTIONS

- ☐ Automatic restretching while discharging ☐ Extraction protection
 Tensioning device for outlet: ☐ manual ☐ pneumatic

WEIGHING SYSTEM (loss in weight)

Use: ☐ yes ☐ no
 Weighing range [kg]: _____ to _____ accuracy [+/-]: _____

DOSING DEVICE

- Dosing device: ☐ yes ☐ no Dosing capacity: [kg/batch]: _____ [kg/h]: _____
☐ Screw ☐ Vibration chute ☐ ProClean Conveyor PCC
☐ Flap ☐ Rotary valve
☐ Flexkon dosing device ☐ Slide valve

CONVEYING AFTER DISCHARGING

Conveying: ☐ yes ☐ no ☐ mechanical ☐ pneumatic

Conveying path [m]: horizontal: _____ vertical: _____




Conveying capacity: [kg/batch]: _____ [kg/h]: _____

Operating time: [h/day]: _____

CONNECTION SYSTEMS FOR LOW-DUST WORKING

	CAS	AAS	AAS-EF
			
DESCRIPTION	Cost-efficient starter version for low-dust FIBC discharging	Connection system for FIBC discharging with double protection against dust leakage	Connection system with integrated dedusting unit for FIBC discharging (no separate filter required)
FIBCS	with/ without inner liner	with/ without inner liner	with/ without inner liner
OEL¹	1,000 - 5,000 µg/m³	100 - 5,000 µg/m³	100 - 5,000 µg/m³
PRODUCTS	non-hazardous	non-hazardous	non-hazardous
VERSIONS	Industry Chemical industry Pharmaceutical industry	Industry Chemical industry Pharmaceutical industry	Industry Chemical industry Pharmaceutical industry

CONNECTION SYSTEMS FOR DUST-FREE WORKING

	SOLIVALVE®	SAS	LAS
			
DESCRIPTION	Automated connection system with possible metering for low-contamination discharge of FIBCs with integrated conical closure	Dust-free connection system for discharging FIBCs with continuous liner technology and integrated extraction protection	Dust-free high-containment connection system for discharging FIBCs
FIBCS	SoliBag® with conical closure	FIBCs / bins with inner liner	FIBCs / bins with inner liner
OEL¹	10 - 100 µg/m³	5 - 20 µg/m³	≥ 1 µg/m³
PRODUCTS	less hazardous	hazardous	very hazardous
VERSIONS	Industry Chemical industry Pharmaceutical industry	Industry Chemical industry Pharmaceutical industry	Industry Chemical industry Pharmaceutical industry

¹ AGW: Arbeitsplatzgrenzwert
OEL: Occupational Exposure Limit

DESCRIPTION

The **compact connection system CAS** by HECHT is a cost-efficient starter version for low-dust discharging (up to OEL < 1.000 - 5.000 µg/m³) of FIBCs (with or without inner liner). The CAS is designed for handling non-hazardous products in simple industrial, chemical, food or pharmaceutical applications.



HANDLING AND TECHNICAL FEATURES



The compact connection system distinguishes itself by its easy handling. For discharging, you just have to pull the closed FIBC outlet over the product tube and fix it using the sealing flange. The latter is possible using the **two-hand lever mechanism**, which makes sure that the operator cannot squeeze his/her fingers between the sealing flange and the product tube in case of proper handling. Then, the FIBC outlet can be opened and the FIBC can be discharged in low-dust mode.

Using an optional **WIP** equipment (Washing in Place) with integrated spray nozzle, the CAS can also be cleaned.

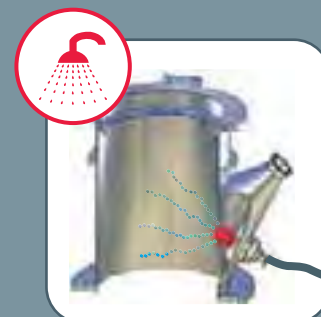
Via the suction nozzle, the complete system including the FIBC can be dedusted and/or evacuated.

Simple FIBC discharge station with support table and compact connection system CAS

AT A GLANCE



Cost-efficient starter version for low-dust FIBC discharge



Washing with integrated spray nozzle

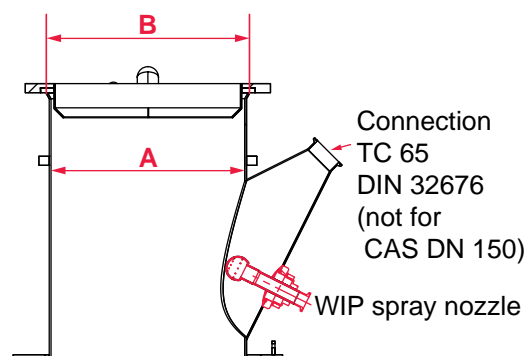
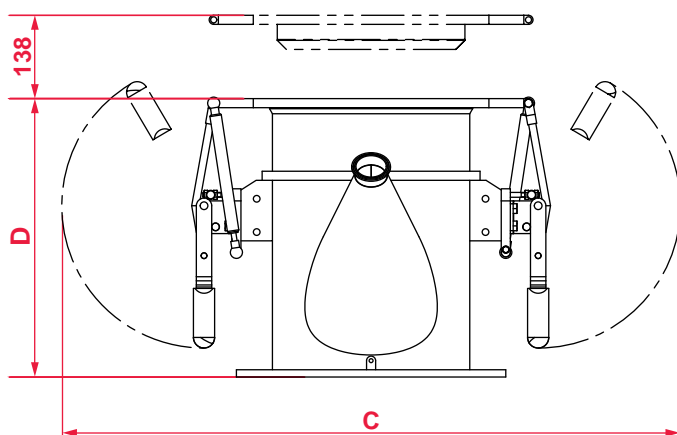
SCOPE OF DELIVERY

- ◆ Connection system (Stainless steel or galvanized steel) and sealing flange (stainless steel)
- ◆ Suction nozzle
- ◆ Fastening (flange, lateral supports or mounting arm on the rear)

OPTIONS

- ◆ Ex version
- ◆ WIP version with integrated spray nozzle
- ◆ Dedusting / Evacuation

CAS STANDARD DIMENSIONS



CAS type	Product tube (A) [mm]	Connection ring \varnothing (B) [mm]	Operating width (C) [mm]	Height (D) [mm]
150	150	165	850	355
320	320	335	1020	460

LATERAL SUPPORTS

- ◆ Standard version for direct fastening to the frame
- ◆ Alternative: Fastening from behind with supporting arms (only for CAS DN 320)



FLANGE

- ◆ Version for direct fastening on the following unit (e.g. reactor, container, screw, etc.)

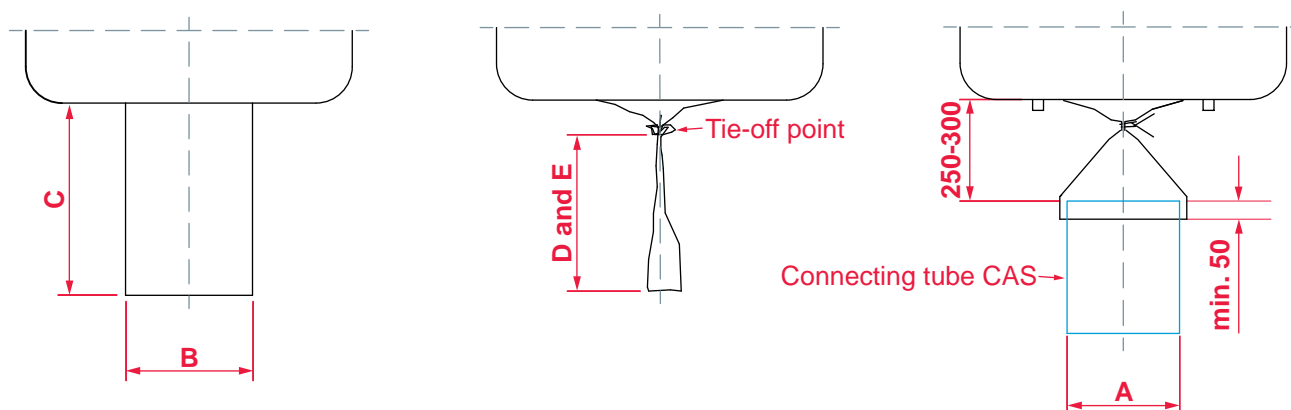


CAS type	Outer \varnothing (E) [mm]	Hole circle \varnothing (F) [mm]	Inner \varnothing / NW (G) [mm]
150	285	240	150
320	445	400	320

DIMENSIONING FIBC OUTLET

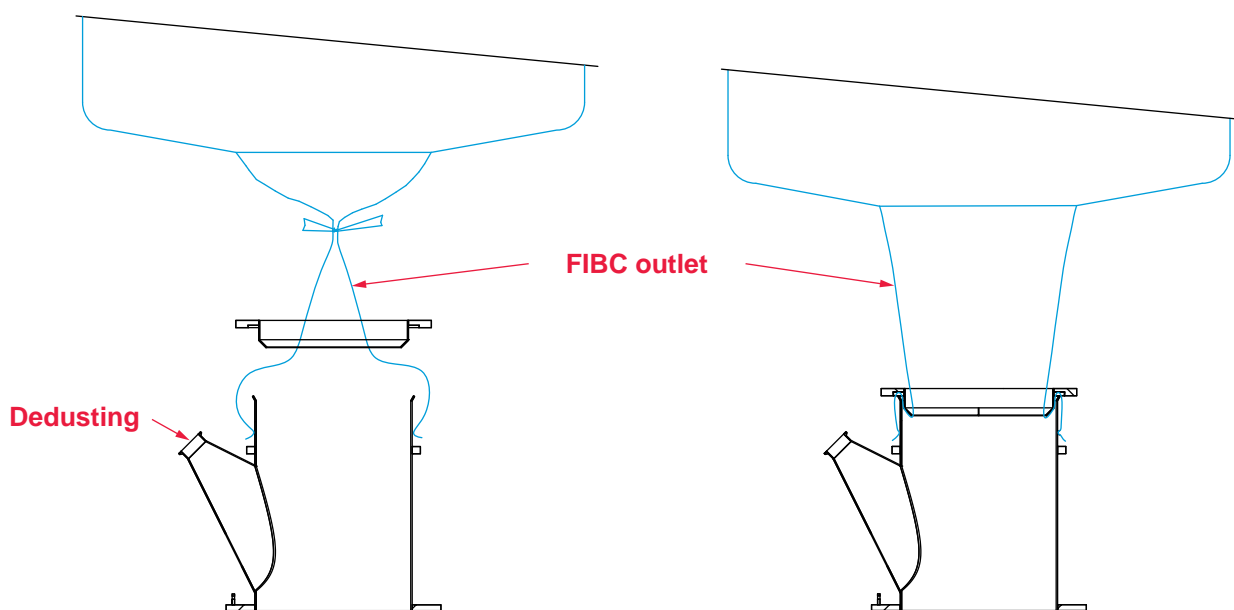
To allow the FIBC to be properly and safely connected to the respective size of the connection ring, both diameter and length of the FIBC outlet must feature certain **minimum dimensions**.

This is due to the fact that, for safe connection, the FIBC outlet is put over the product tube, and the operator additionally requires a working height of 250 to 300 mm.



DIMENSIONS AND SIZES

CAS type [Ø]	Connection ring Ø (A) [mm]	Ø FIBC outlet (B) [mm]	Recommended length of FIBC outlet (C) [mm]	Recommended length of FIBC outlet after tie-off (D) [mm]	Minimum length of FIBC outlet after tie-off (E) [mm]
150	165	185-350	600	450	400
320	335	350-500	650	450	400



FIBC outlet is put over the connection tube.

FIBC outlet is clamped and sealed.

DESCRIPTION

The **outlet connection system AAS** by HECHT is used for low-dust discharging (up to OEL 1.000 – 5.000 µg/m³) of FIBCs with or without inner liner and features a double protection against dust leakage.

Environment and operator are protected against coarse contamination.

The AAS is used in particular when handling non-hazardous and dusty bulk solids in the chemical, food and pharmaceutical industries.



HANDLING AND TECHNICAL FEATURES



Big Bag discharge station with AAS

The outlet connection system distinguishes itself by its easy handling. For discharging, you just have to pull the closed FIBC outlet over the inner tube and fix it using the sealing flange. The latter is possible using the **two-hand lever mechanism**, which makes sure that the operator cannot squeeze his/her fingers between the sealing flange and the outer tube in case of proper handling.

When connecting the FIBC outlet, folds may occur at the inner tube where product can escape. To prevent this, the "double ring" consisting of outer and inner tube serves as **additional protection**. The product will then be collected in this area and fed back to the product flow.

When using FIBCs with different outlet diameters, **the inner tube can be exchanged** (optional) in order to adapt the AAS to the required outlet.

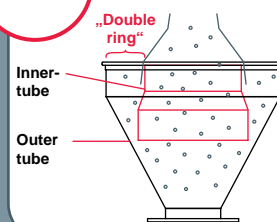
To remove excess air, the entire system including the FIBC can be dedusted and evacuated after discharging via the exhaust connector.

AT A GLANCE

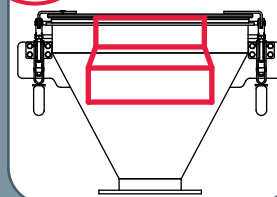


Two-hand lever mechanism avoids risk of squeezing

2x



Additional protection against dust leakage



Exchangeable inner tube for different FIBC outlets

SCOPE OF DELIVERY

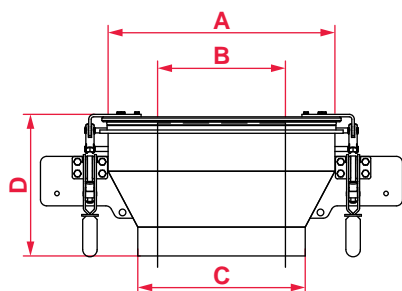
- ◆ Connection system (product-touched: stainless steel) and sealing flange (stainless steel or aluminium)
- ◆ Exhaust connector
- ◆ Outlet: connector, flange or clamp

OPTIONS

- ◆ Ex-version
- ◆ Filter retrofit kit (see accessories)
- ◆ Exchangeable inner tube
- ◆ Dedusting / evacuation

AAS WITH TUBULAR OUTLET

for all AAS types (A)



AAS 550

Inner tube \varnothing (B) [mm]	210	260	310	360
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can be combined with the following outlet sizes / heights:

Tubular outlet \varnothing (C) [mm]	200	300	400
---------------------------------------	-----	-----	-----

Height (D) [mm]	530	437	343
-----------------	-----	-----	-----

AAS 650

Inner tube \varnothing (B) [mm]	260	310	360	410	460	510
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can be combined with the following outlet sizes / heights:

Tubular outlet \varnothing (C) [mm]	300	400	500
---------------------------------------	-----	-----	-----

Height (D) [mm]	530	434	343
-----------------	-----	-----	-----

AAS 750

Inner tube \varnothing (B) [mm]	460	510	560	610
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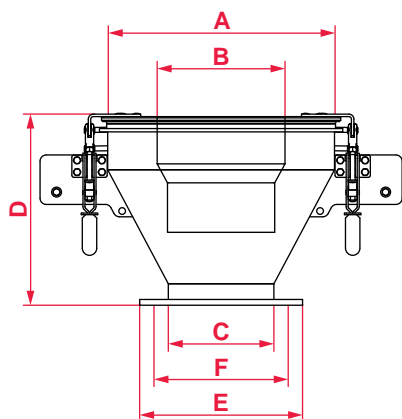
can be combined with the following outlet sizes / heights:

Tubular outlet \varnothing (C) [mm]	300	400	500	600
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Height (D) [mm]	643	529	434	340
-----------------	-----	-----	-----	-----

AAS WITH FLANGE OUTLET (according to ISO EN 1092 with reduced flange thickness)

for all AAS types (A)



AAS 550

Inner tube \varnothing (B) [mm]	210	260	310	360
-----------------------------------	-----	-----	-----	-----

can be combined with the following outlet sizes / heights:

Flange outlet \varnothing (C) [mm]	200	300	400
--------------------------------------	-----	-----	-----

Flange outer \varnothing (E) [mm]	340	445	565
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Hole circle \varnothing (F) [mm]	295	400	515
------------------------------------	-----	-----	-----

Height (D) [mm]	514	414	415
-----------------	-----	-----	-----

AAS 650

Inner tube \varnothing (B) [mm]	260	310	360	410	460	510
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can be combined with the following sizes / heights:

Flange outlet \varnothing (C) [mm]	300	400
--------------------------------------	-----	-----

Flange outer \varnothing (E) [mm]	445	565
-------------------------------------	-----	-----

Hole circle \varnothing (F) [mm]	400	515
------------------------------------	-----	-----

Height (D) [mm]	516	414
-----------------	-----	-----

AAS 750

Inner tube \varnothing (B) [mm]	460	510	560	610
-----------------------------------	-----	-----	-----	-----

can be combined with the following outlet sizes / heights:

Flange outlet \varnothing (C) [mm]	300	400
--------------------------------------	-----	-----

Flange outer \varnothing (E) [mm]	445	565
-------------------------------------	-----	-----

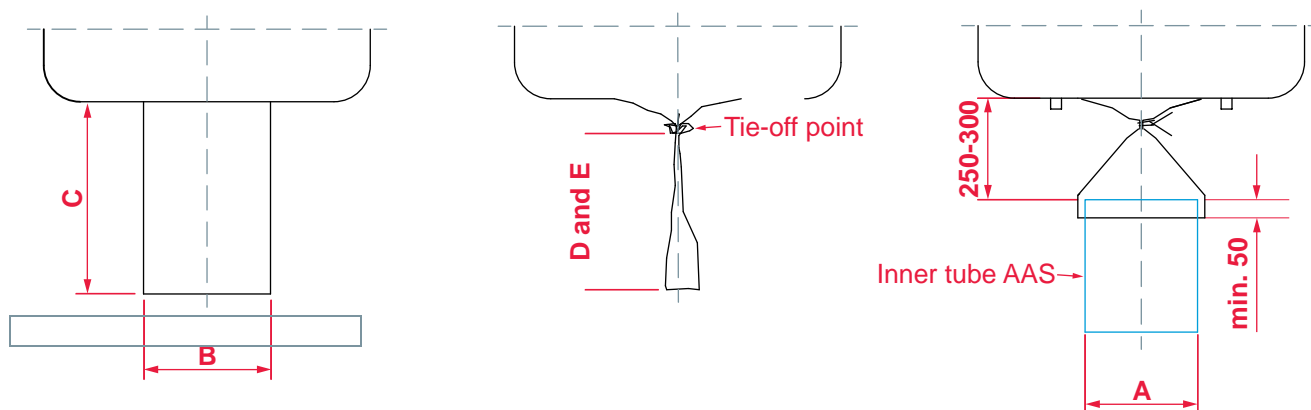
Hole circle \varnothing (F) [mm]	400	515
------------------------------------	-----	-----

Height (D) [mm]	508	590
-----------------	-----	-----

DIMENSIONING FIBC OUTLET

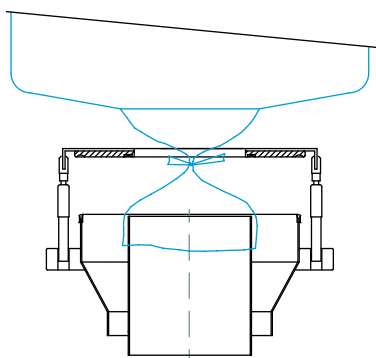
To allow the FIBC to be properly and safely connected to the respective size of the inner tube, both diameter and length of the FIBC outlet must feature certain **minimum dimensions**.

This is due to the fact that, for safe connection, the FIBC outlet is put at least 50 mm over the inner tube, and the operator additionally requires a working height of 250 to 300 mm.

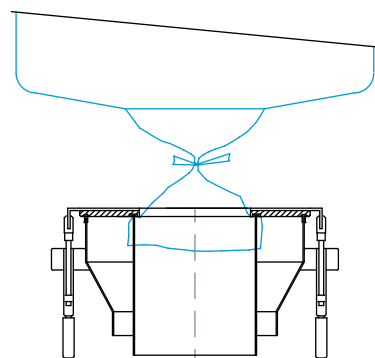


DIMENSIONS AND SIZES

AAS type (Ø)	Inner tube (A) [Ø, mm]	FIBC outlet (B) [Ø, mm]	Recommended length of FIBC outlet (C) [mm]	Recommended length of FIBC outlet after tie-off (D) [mm]	Minimum length of FIBC outlet after tie-off (E) [mm]
D550	210	250-300	500	350	300
	260	300-350	500	350	315
	310	350-400	550	400	335
	360	400-450	600	400	350
D650	410	450-500	650	400	370
	460	500-550	700	450	390
D750	510	550-600	750	450	410
	560	600-650	800	450	430
	610	650-700	850	500	450



FIBC outlet put over the inner tube.

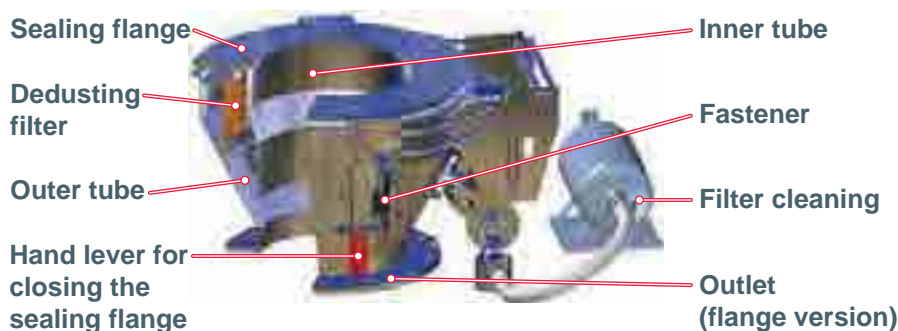


FIBC outlet clamped and sealed.

DESCRIPTION

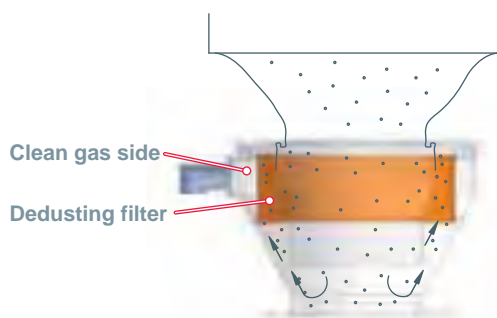
The **outlet connection system with integrated dedusting filter AAS-EF** is the further development of the proven AAS by HECHT. It is used for low-dust discharging (up to OEL 100-1,000 µg/m³) of slightly hazardous and dusty bulk solids from FIBCs and protects the room against contamination. The AAS-EF is preferably used in the chemical, food, and pharmaceutical industries.

Due to the integrated dedusting filter, the acquisition of an external filter unit will no longer be required.



HANDLING AND TECHNICAL FEATURES

Due to the integrated dedusting filter, no external filter will be required. Compared to the AAS-EF, an external filter involves high acquisition costs and requires valuable space (**space-saving**).



The integrated dedusting filter makes sure that dusty and dust-free air (clean gas side) are separated, preventing product from getting to the clean gas side or into the extraction.

Time-consuming cleaning of the dedusting unit, product loss, and product carryover belong to the past.

In terms of operation, the AAS-EF does not differ from the basic connection system AAS. It is also operated using **two-hand lever mechanism**.

When using FIBCs with different outlet diameters, **the inner tube can be exchanged** (option) in order to adapt the AAS-EF to the outlet diameter of the FIBC used.

SCOPE OF DELIVERY

- ◆ Connection system (product-touched: stainless st.) and sealing flange (stainless steel or aluminium)
- ◆ Filter cleaning (max. 3-4 bar)
- ◆ Outlet: nozzle, flange or clamp
- ◆ Dedusting filter
- ◆ Pneumatic control

OPTIONS

- ◆ Ex-version
- ◆ exchangeable inner tube
- ◆ extraction / evacuation
 - ◆ with suction pipe (DIN EN 10220, Ø 60.3 x 2 mm)
 - ◆ and pressure control valve (internal thread 1/4")

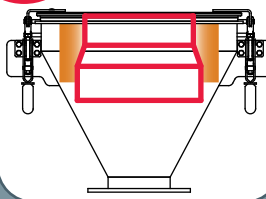
AT A GLANCE



Two-hand lever mechanism avoids risk of squeezing



Space and cost saving as no external filter is required



Exchangeable inner tube for different FIBC outlets

AAS WITH TUBULAR OUTLET

for all AAS-EF types (A)



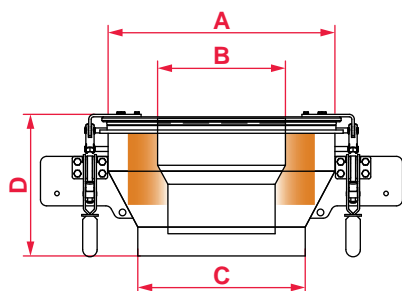
AAS 550

Inner tube \varnothing (B) [mm]	210	260	310
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can be combined with the following outlet sizes / heights:

Tubular outlet \varnothing (C) [mm]	200	300	400
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Height (D) [mm]	530	437	343
-----------------	-----	-----	-----



AAS 650

Innenrohr- \varnothing (B) [mm]	260	310	360	410	460	510
-----------------------------------	-----	-----	-----	-----	-----	-----

can be combined with the following outlet sizes / heights:

Tubular outlet \varnothing (C) [mm]	300	400	500
---------------------------------------	-----	-----	-----

Height (D) [mm]	530	434	343
-----------------	-----	-----	-----

AAS WITH FLANGE OUTLET (according to ISO EN 1092 with reduced flange thickness)

for all AAS-EF types (A)



AAS 550

Inner tube \varnothing (B) [mm]	210	260	310	360
-----------------------------------	-----	-----	-----	-----

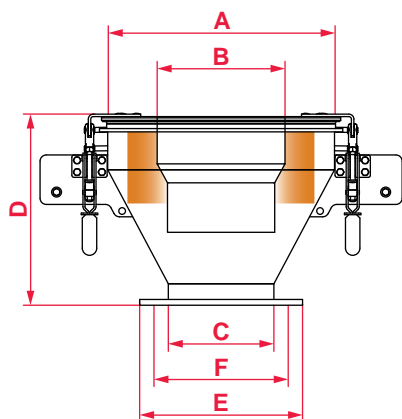
can be combined with the following outlet sizes / heights:

Flange outlet \varnothing (C) [mm]	200	300	400
--------------------------------------	-----	-----	-----

Flange outer \varnothing (E) [mm]	340	445	565
-------------------------------------	-----	-----	-----

Hole circle \varnothing (F) [mm]	295	400	515
------------------------------------	-----	-----	-----

Height (D) [mm]	514	414	415
-----------------	-----	-----	-----



AAS 650

Inner tube \varnothing (B) [mm]	260	310	360	410	460	510
-----------------------------------	-----	-----	-----	-----	-----	-----

can be combined with the following outlet sizes / heights:

Flange outlet \varnothing (C) [mm]	300	400
--------------------------------------	-----	-----

Flange outer \varnothing (E) [mm]	445	565
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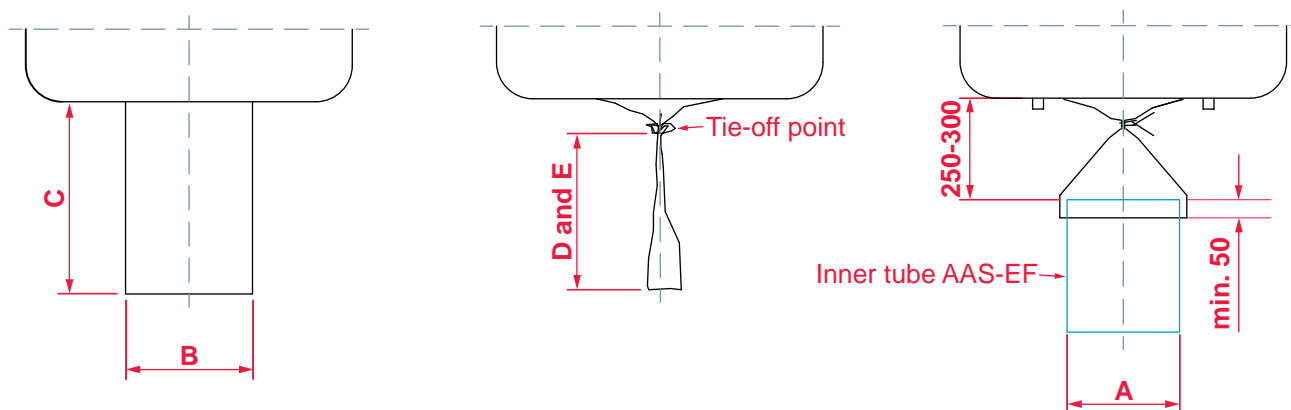
Hole circle \varnothing (F) [mm]	400	515
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Height (D) [mm]	516	414
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DIMENSIONING FIBC OUTLET

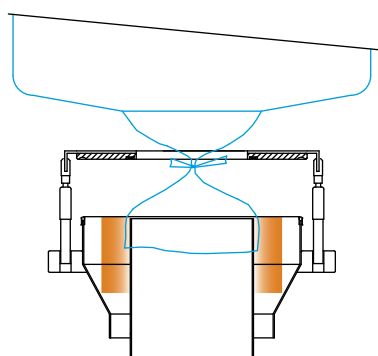
To allow the FIBC to be properly and safely connected to the respective size of the inner tube, both diameter and length of the FIBC outlet must feature certain **minimum dimensions**.

This is due to the fact that, for safe connection, the FIBC outlet is put at least 50 mm over the inner tube, and the operator additionally requires a working height of 250 to 300 mm.

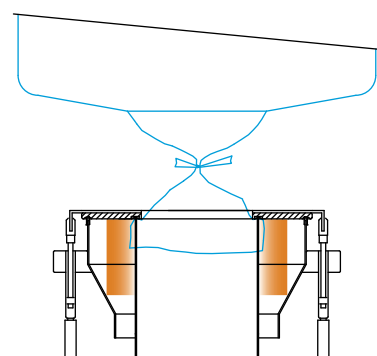


DIMENSIONS AND SIZES

AAS-EF Typ (Ø)	Inner tube (A) [Ø, mm]	FIBC outlet (B) [Ø, mm]	Recommended length of FIBC outlet (C) [mm]	Recommended length of FIBC outlet after tie-off (C) [mm]	Minimum length of FIBC outlet after tie-off (D) [mm]
D550	210	250-300	500	350	300
	260	300-350	500	350	315
	310	350-400	550	400	335
D650	360	400-450	600	400	350
	410	450-500	650	400	370
	460	500-550	700	450	390



FIBC outlet put over the inner tube.



FIBC outlet clamped and sealed.

DESCRIPTION

The **SoliValve® Split-cone System** by HECHT enables fully automatic, low-contamination as well as contained discharging and dosing (up to OEL 10-100 µg/m³) of slightly hazardous products from special FIBCs with conical closure (SoliBag®).

For this purpose, a passive split-cone valve is fit into the FIBC bottom so that it can be automatically docked to the active part (SoliValve® active valve).

The system is therefore particularly suited for chemical, food, and pharmaceutical applications as well as for avoiding cross-contamination.

In addition, using Soli-Bags® is an economical alternative to using containers / IBCs. Soli-Bags® can be reused up to 20 times.

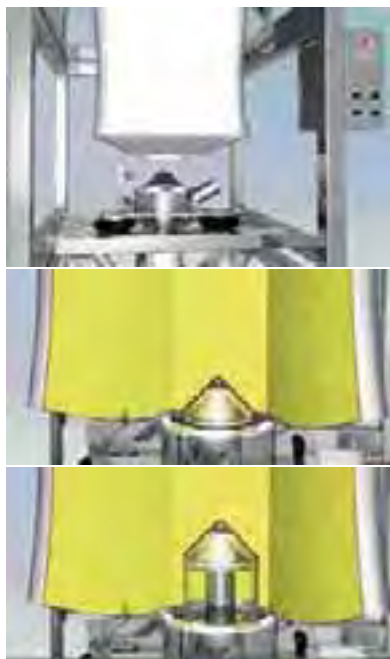
**FIBC SoliBag®
with conical closure**

**SoliValve®
active valve**

Control



HANDLING AND TECHNICAL FEATURES



Automatic connection and discharge by means of the integrated discharge aid (lifting and lowering of the conical closure)

Automatic connection of the Soli-Bags® using the SoliValve® split-cone system not only makes working easier for the operator, but also requires **less ceiling height**, as docking is possible at ground level.

The **integrated discharge aid** facilitates discharging of poor-flowing bulk material by lifting and lowering the conical closure. An optional supply of air or inert gas provides for fluidization of the product at the outlet.

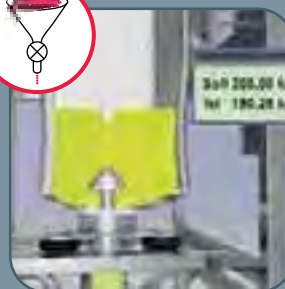
By controlling the active valve, product can be **dosed** from the FIBC. In the case of **partial discharge**, the SoliBag® is closed again by the integrated conical closure after disconnection and can be connected again and discharged at a later point in time.

CIP nozzles (Cleaning in Place) and a cleaning cover allow for hygienic cleaning of the entire connection system.

AT A GLANCE



Automatic connection of the SoliBag® at the push of a button



Dosing and partial discharge possible

SCOPE OF DELIVERY

- ◆ SoliValve® active valve (stainless steel)
- ◆ SoliBag® with passive split-cone valve
- ◆ Control
- ◆ SoliValve® support table
- ◆ Mechanical or pneumatic discharge aid

OPTIONS

- ◆ Ex-version
- ◆ CIP-version
- ◆ gravimetric metering control
- ◆ Fluidization
- ◆ N₂-blanketing

DESCRIPTION

The **protective liner connection system SAS** by HECHT permits dust-free and contained discharging (up to OEL 5-20 $\mu\text{g}/\text{m}^3$) of FIBCs and other bins with inner liner by means of continuous liner technology. Thus, operator, environment and product are protected against contamination from outside.

The SAS is used in particular when handling hazardous products and for demanding applications in the chemical, food, and pharmaceutical industries.

In addition to FIBCs, it is also possible to connect mini bags, drums, or containers / IBCs (adapter required).

Inner liner FIBC

Disposable counter ring

Radial seal

Axial seal

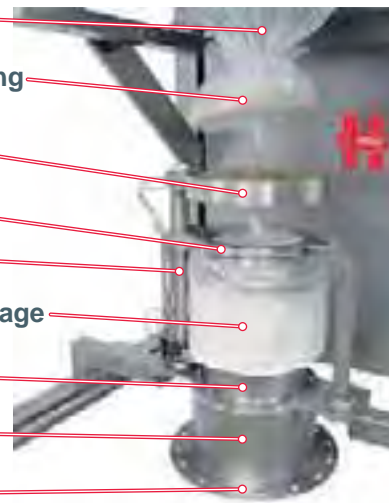
Swivel column

Continuous liner package

Product tube

Suction chamber

Connecting flange



HANDLING AND TECHNICAL FEATURES

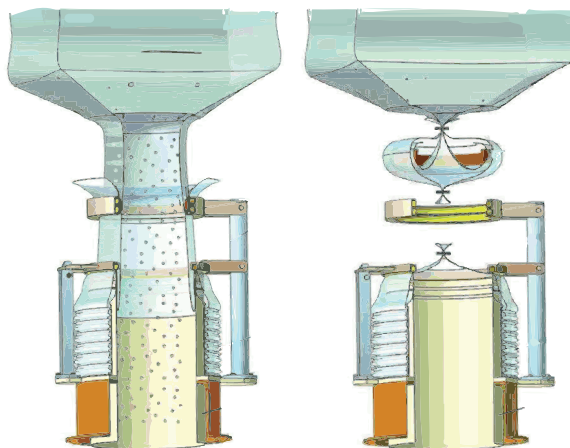
The continuous protective liner enables **contained and contamination-free connection and discharge**. Even when no FIBC is connected, the product tube is closed by the protective liner.

The folded **continuous liner package** is a liner dispenser (up to 30m) that permits the connection of several FIBCs and requires only little storage space. Its replacement is contamination-free, too.

The SAS can be equipped with an **extraction protection** (option).

Automatic retightening prevents the FIBC outlet from being unintentionally pulled out of the connection system, e.g. when lifting the FIBC by means of the chain hoist.

Besides, the SAS can be cleaned using an optional **WIP hood** (Washing in Place).



SAS during (left) and after discharge (right)

AT A GLANCE



Closed and safe handling due to protective liner



Extraction protection prevents unintentional pulling out of the FIBC outlet

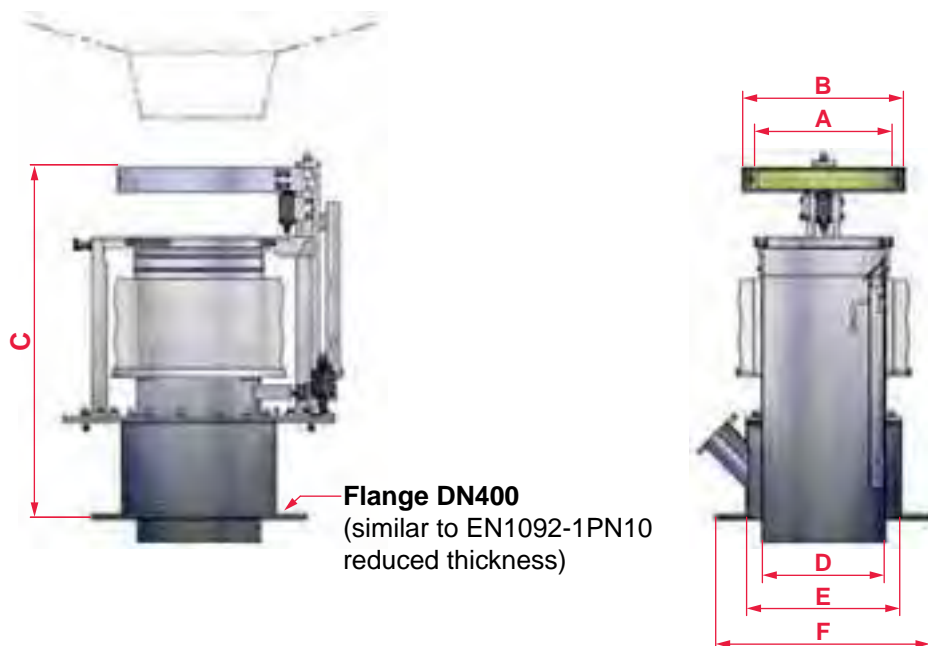
SCOPE OF DELIVERY

- ◆ Connection system SAS (product-touched: stainless steel)
- ◆ Mounting (on flange or at lateral supports)
- ◆ Expendables (continuous liner package, disposable counter ring, clamping ring, liner clips)

OPTIONS

- ◆ Ex-version
- ◆ WIP-version with spray nozzles
- ◆ Extraction / evacuation
- ◆ Extraction protection (electric or pneumatic) incl. adjustment of the lifting device

SAS STANDARD DIMENSIONS



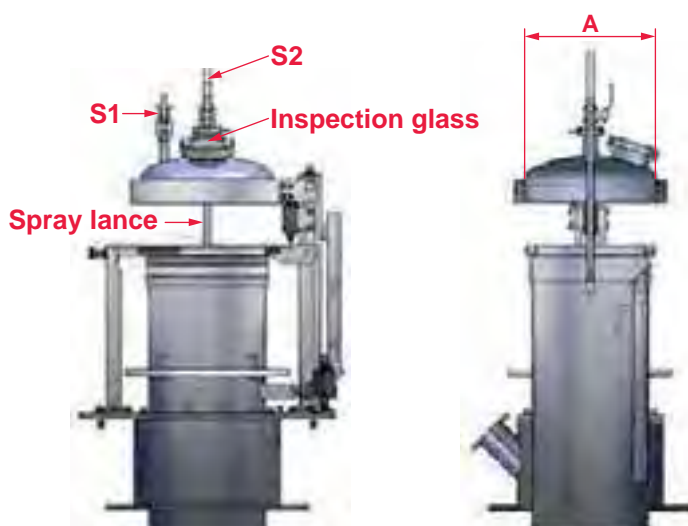
SAS type	Disposable counter ring (A) [Ø, mm]	Radial seal (B) [Ø, mm]	Height (C) [mm]	Inner Ø (D) [mm]	Hole circle Ø (E) [mm]	Outer Ø (F) [mm]
270	270	330	920	320	400	565
365	365	425	920	320	400	565

OPTION: SAS-WIP

The optional WIP hood (Washing in Place) can be used for prewashing of the SAS. Instead of the disposable counter ring, the WIP hood is clamped into the radial seal.

Scope of delivery

- ◆ WIP hood
- ◆ Spray lance
- ◆ Inspection glass DN100 (only for type 365)
- ◆ N₂ connection (optional)

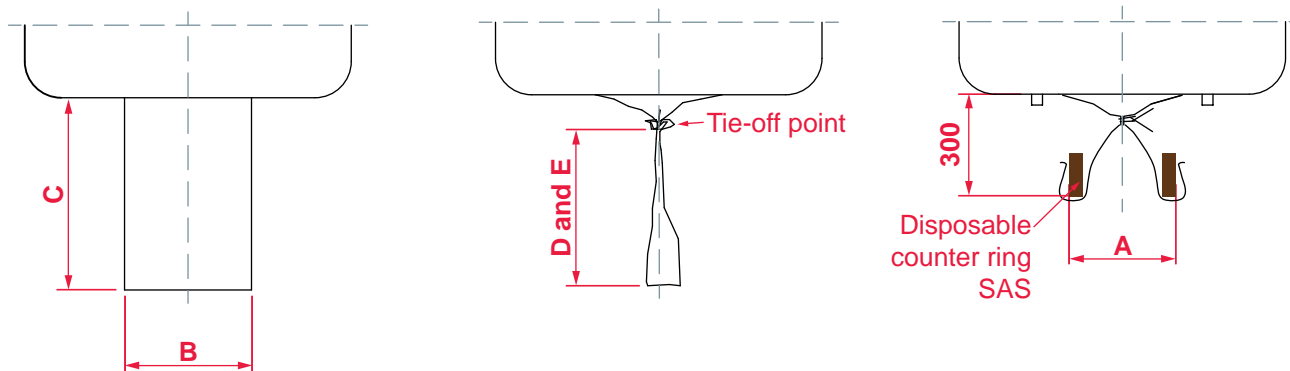


SAS type	WIP hood (A) [Ø, mm]	Spray lance connection (S1) clamp connection BS 4825	N ₂ connection (optional) (S2) clamp connection BS 4825
270	270	3/4"	1"
365	365	3/4"	1"

DIMENSIONING FIBC OUTLET

To allow the FIBC to be properly and safely connected to the SAS, both diameter and length of the FIBC outlet must feature certain **minimum dimensions**.

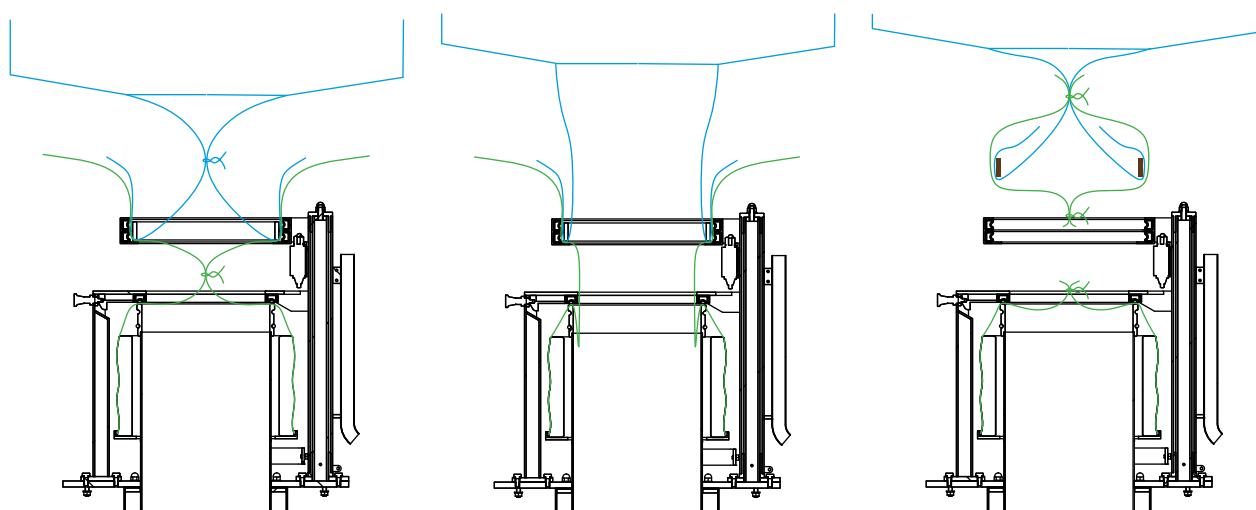
This is due to the fact that, for safe connection, the FIBC outlet must be put around the disposable counter ring, and the operator additionally requires a working height of 300 mm.



DIMENSIONS AND SIZES

SAS type [Ø]	Disposable counter ring (A) [Ø, mm]	FIBC outlet (B) [Ø, mm]	Recommended length of FIBC outlet (C) [mm]	Recommended length of FIBC outlet after tie-off (D) [mm]	Minimum length of FIBC outlet after tie-off (E) [mm]
270	270	300-400	650	450	400
365	365	380-500	650	450	400

CLOSED DISCHARGING



FIBC outlet inserted into counter ring and sealed with radial seal.

Lace fastening loosened.
FIBC is discharged.

FIBC outlet tied off with counter ring and protective liner and undocked. FIBC and product tube remain closed.

DESCRIPTION

The **liner connection system LAS** by HECHT enables dust-free high-containment discharging (up to OEL $\geq 1 \mu\text{g}/\text{m}^3$) of FIBCs and other bins with inner liner. Thus, operator, environment and product are protected against contamination from outside.

The high containment, even when changing the FIBC, is possible by the use of protective liners.

The LAS is used in particular when handling very hazardous products and for more demanding applications in the chemical, food, and pharmaceutical industries, e.g. for avoiding cross-contamination.

In addition to FIBCs, it is also possible to connect mini bags, drums, or containers / IBCs (adapter required).

Sealing flange

Product tube

Lateral access hole

Hand lever for opening and closing the sealing flange

Fastener



HANDLING AND TECHNICAL FEATURES



FIBC discharge station with
liner connection system LAS

Despite **easy handling** by means of two-hand lever mechanism, the liner connection system can be used **in the high-containment area as well.**

A protective liner closes both the product tube and the lateral access hole even when no FIBC is connected.

For discharge, the inner liner of the FIBC is connected directly at the product tube by means of a connecting ring. Then, a liner bag is fastened at the lateral access hole, which permits contamination-free removal of the shower cap of the FIBC connected before at the opening of the product tube.

Finally, the sealing flange is closed, and the FIBC outlet can be opened for discharge.

Besides, an optional WIP- or CIP-version (Washing / Cleaning in Place) permits the LAS to be washed and hygienically cleaned.

AT A GLANCE



PRODUCT
PROTECTION



OPERATOR
PROTECTION

Product and operator protection,
even when handling very
hazardous products



Cleaning with mit hygienic
CIP or WIP version

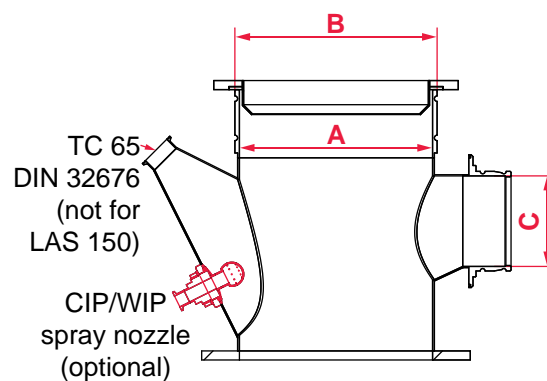
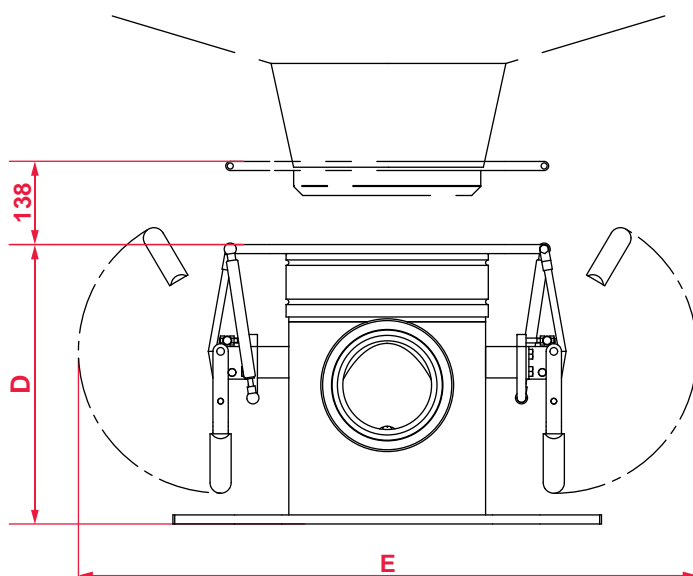
SCOPE OF DELIVERY

- ◆ Connection system (Stainless steel or galvanized steel) and sealing flange (stainless steel)
- ◆ Suction nozzle
- ◆ Mounting (flange, side supports or mounting arms)
- ◆ Expendables (connecting rings, extraction bags, liner clips)

OPTIONS

- ◆ Ex-version
- ◆ WIP-version with hood and spray nozzle
- ◆ CIP-version with hood and spray nozzles
- ◆ Dedusting / evacuation

LAS STANDARD DIMENSIONS



LAS type	Product tube (A) [mm]	Connection ring Ø (B) [mm]	Access hole (C) [Ø, mm]	Height (D) [mm]	Operating width (E) [mm]
150	150	165	150	355	850
320	320	335	150	460	1020

LATERAL SUPPORTS

- ◆ Standard version for direct fastening to the frame
- ◆ Alternative: Fastening from behind with supporting arms (only for LAS DN 320)



FLANGE

- ◆ Version for direct fastening on the following unit (e.g. reactor, container, screw, etc.)

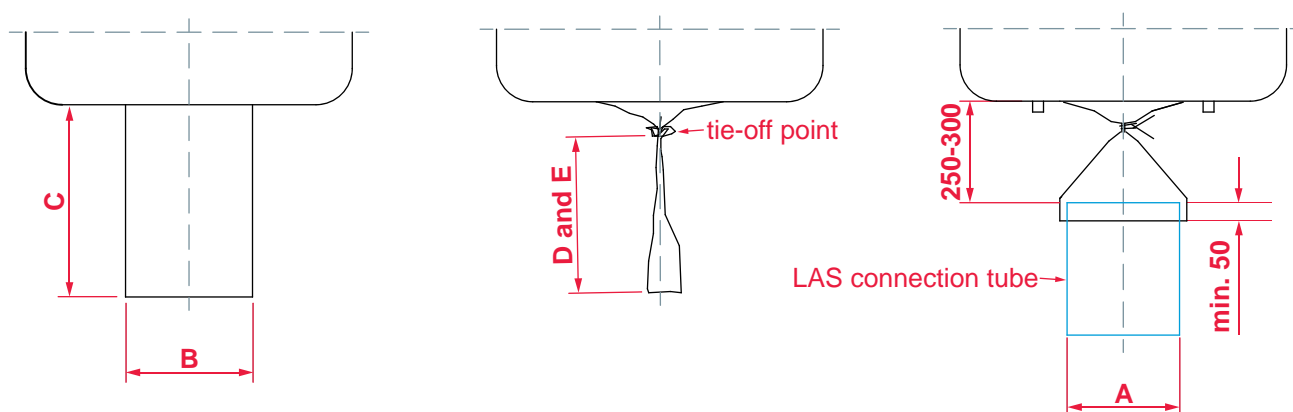


LAS type	Outer Ø (F) [mm]	Hole circle Ø (G) [mm]	Inner Ø / NW (H) [mm]
150	285	240	150
320	445	400	320

DIMENSIONING FIBC OUTLET

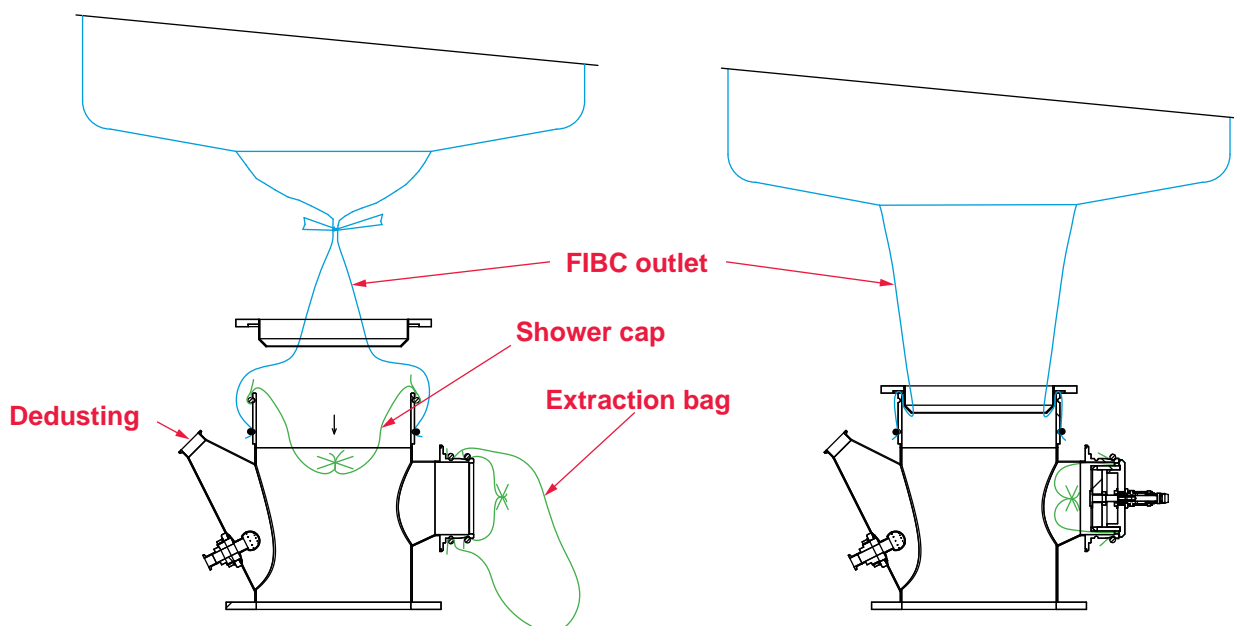
To allow the FIBC to be properly and safely connected to the respective size of the LAS connection tube, both diameter and length of the FIBC outlet must feature certain **minimum dimensions**.

This is due to the fact that, for safe connection, the FIBC outlet is fastened to the product tube using a connection ring (seal), and the operator additionally requires a working height of 250 to 300 mm.



DIMENSIONS AND SIZES

LAS type [Ø]	Connection ring Ø (A) [mm]	Ø FIBC outlet (B) [mm]	Recommended length of FIBC outlet (C) [mm]	Recommended length of FIBC outlet after tie-off (D) [mm]	Minimum length of FIBC outlet after tie-off (E) [mm]
150	165	185-350	600	450	400
320	335	350-500	650	450	400



The FIBC outlet is fastened to the product tube using the connection ring. The product tube is still closed by a shower cap.

The FIBC is safely connected and the lateral access hole is closed again.

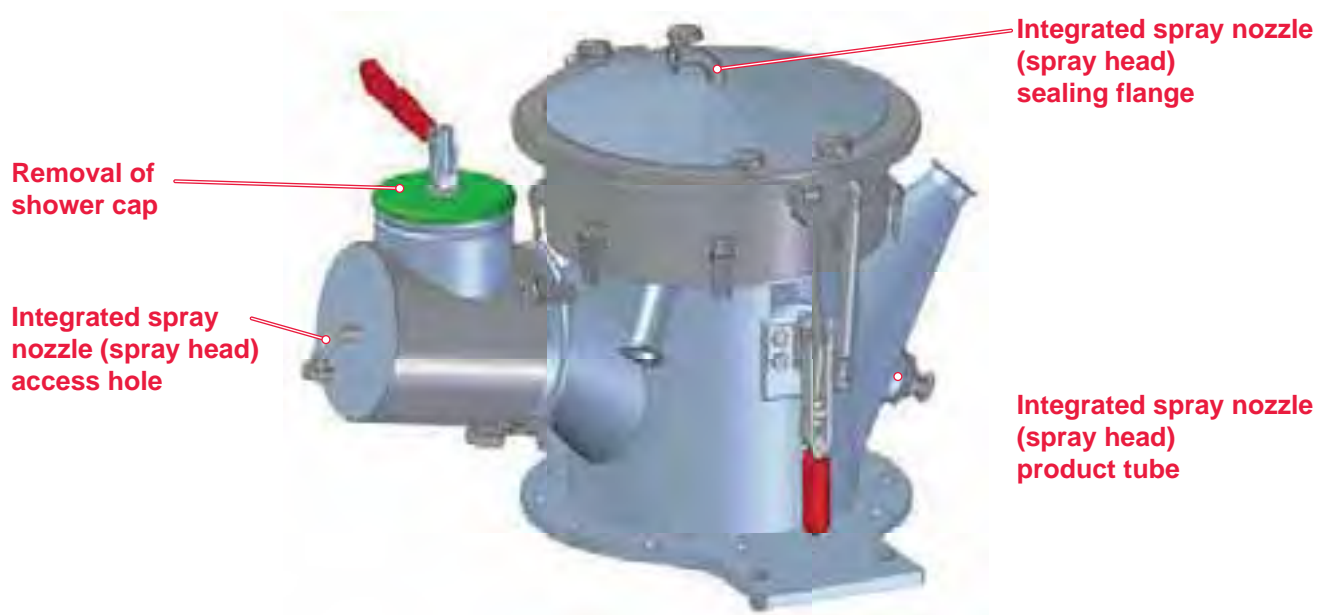
WIP VERSION




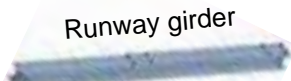









For washing (Washing in Place) the liner connection system with integrated spray nozzle and hood for covering the access hole.



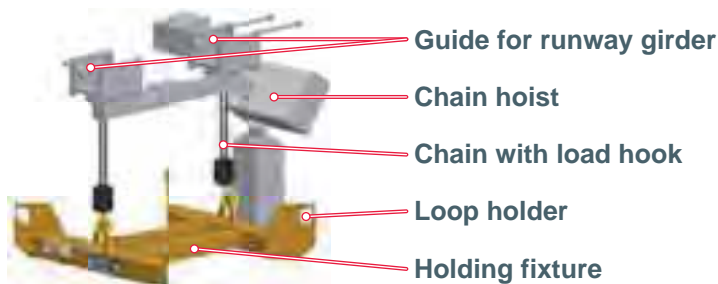
CIP VERSION

For full hygienic cleaning (Cleaning in Place) of the liner connection system with integrated spray nozzle, covers for access hole and product tube as well as drain.



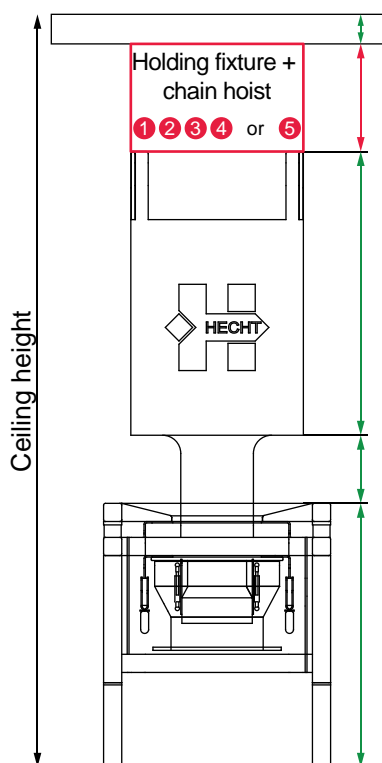
	FRAMES	FIBC SUPPORTS	LIFTING DEVICES
TABLES	 <p>Standard Table</p>	 <p>Support table (SAT)</p>	 <p>Lifting column</p> <div>  <p>Runway girder</p> <p>+</p>  <p>Holding fixtures + chain hoists</p> </div>
GANTRIES	 <p>Cantilever gantry with runway girder</p>	 <p>Support table - vibration (SAT-V)</p>	 <p>Holding fixtures + chain hoists</p>
	 <p>Bridge gantry with runway girder</p>	 <p>Support table - massaging paddles (SAT-W)</p>	
MODULES	 <p>Modular frame</p>	 <p>Massaging device (pushers)</p>	 <p>Forklift (chain hoist possible)</p>

The standard lifting device for discharging FIBCs for industrial, chemical, and food applications is a holding fixture with chain hoist mounted to a runway girder.



CEILING HEIGHT AS LIMITING FACTOR

Working height + intervention area + FIBC + construction height of lifting device + runway girder ≤ ceiling height



Runway girder (180 mm standard)

Height of lifting device (chain hoist + holding fixture)

→ From lower edge of runway girder to loop holder of holding fixture

FIBC (including loops)

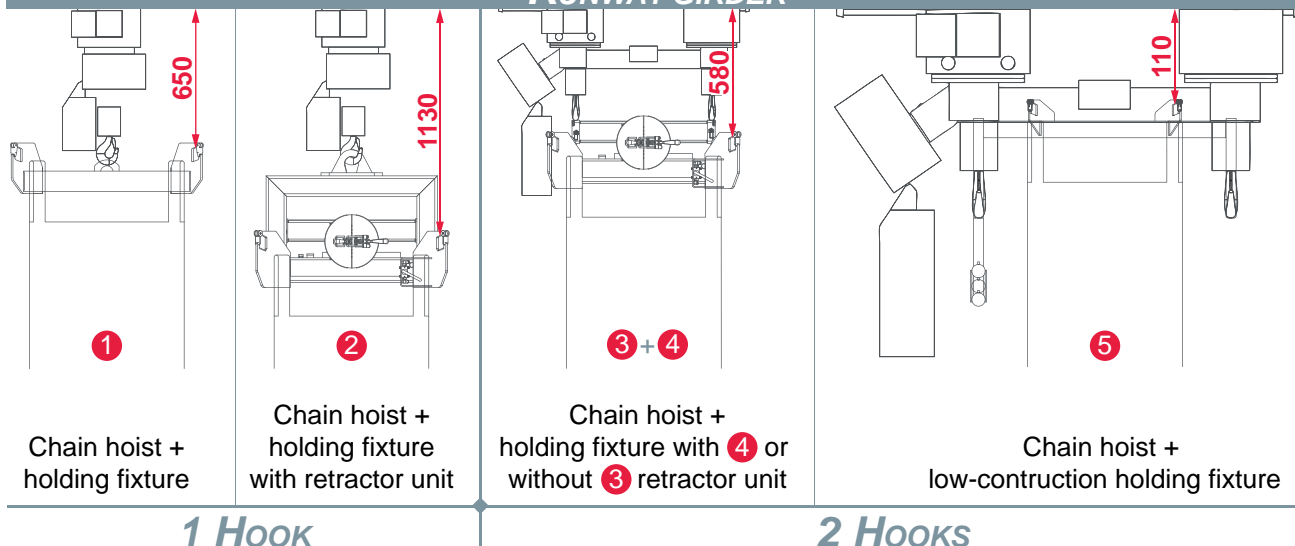
Intervention area (for positioning the FIBC above an outlet connection system)

→ 250-300 mm (standard)

Working height (up to upper edge of SAT, SAT-V or SAT-W)

→ recommended height: 1600 mm (standard)

RUNWAY GIRDER



GENERAL DESCRIPTION GANTRY FRAMES

Gantry frames are stand-alone stations for fastening a connection system and an FIBC support with or without agitation unit.

Use

- ◆ if the local conditions do not allow mounting of a separate runway girder (very big ceiling height, little load capacity of ceiling), or
- ◆ if loss-in-weight discharging is required, or
- ◆ if an independent FIBC discharge station is desired.

☞ In addition to the ceiling height, static conditions and the quality or properties of the ground must also be taken into account.

Equipment

Gantries consist of a frame and an integrated runway girder with chain hoist and holding fixture. Depending on the product characteristics and flow behaviour, the gantry frame is provided with a support table with or without agitation unit.

Version

As cantilever or bridge gantry unit, in galvanized steel, painted or in stainless steel.

CANTILEVER GANTRY



Fig.: Cantilever gantry with runway girder and support table

- ◆ Requires only small floorspace
→ **Advantage:** the roadway remains free
- ◆ Due to the tensile forces produced, the gantry unit must be anchored (quality of the ground!)
- ◆ Loss-in-weight discharging is possible
- ◆ In addition to the connection system, an FIBC support (with or without agitation unit) as well as a chain hoist and a holding fixture are required.

BRIDGE GANTRY



Fig.: Bridge gantry with runway girder and support table

- ◆ The bridge gantry consists of an FIBC handling area and a discharging area.
- ◆ Even load distribution on the floor
- ◆ Loss-in-weight discharging is possible
- ◆ In addition to the connection system and the FIBC support (with or without agitation unit; mounted in the discharging area), a chain hoist and a holding fixture are also required.

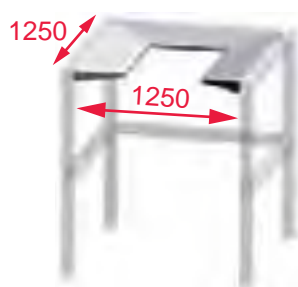
Construction heights and dimensions result from the local conditions and may vary.

Important: In addition to the ceiling height, FIBC height, runway girder, construction height of the lifting device and the intervention area (see BE-I 40 en), a mounting height of 80 mm between the gantry unit and the ceiling must be taken into account.

GENERAL DESCRIPTION OF SUPPORTS

- ◆ FIBC supports are used for working under suspended loads and are standard equipment of nearly all FIBC discharge stations. They provide protection for the operator and the connection system.
- ◆ Not all products can be discharged from the FIBC without problems, in particular due to compactions in the outlet area of the FIBC. Therefore, FIBC support tables can be supplemented by mechanical **discharge aids** in order to support and optimize discharging.
- ◆ All supports can be flexibly used and can be mounted into each frame.

FIBC SUPPORTS WITH AND WITHOUT AGITATION UNIT



Support table SAT

- ◆ **Description:** Basic cost-efficient FIBC support without agitation unit
- ◆ **Products:** For well-flowing and free-flowing products
- ◆ **Function:** Permanently mounted into the frame, only serves as FIBC support



Support table with vibration SAT-V

- ◆ **Description:** FIBC support with vibration motor as agitation unit
- ◆ **Products:** For products that tend to bridging and formation of crystalline compounds or those that require an impulse for discharging
- ◆ **Function:** Vibration motor sets the bottom and the outlet of the FIBC into vibration



Support table with massaging system SAT-W

- ◆ **Description:** FIBC support with massaging system as agitation unit
- ◆ **Products:** For bridging and poor-flowing products
- ◆ **Function:** Mechanical treatment and massaging of the bottom and outlet of the FIBC (optional).



Pusher massaging device

- ◆ **Description:** Addition to SAT-W, additional agitation unit
- ◆ **Products:** For compaction of products not only in the outlet area, or for products where the entire FIBC is a single solid mass (monolith)
- ◆ **Function:** Lateral pushing or squeezing movements at the FIBC

DISCHARGE AID: Outlet tensioning device

Tightens the FIBC outlet during discharging, thus improving in particular the discharge behaviour of poor-flowing and bridging products.

- ◆ The outlet tensioning device is mounted into the frame and holds the connection system.
- ◆ When the FIBC is connected, the tensioning device and the connection system are taken to the upper position. The connection system will then be lowered due to its own weight, thus stretching the FIBC outlet.



The connection system must be connected to a flexible compensator for compensation of the stroke movement.

Mechanical tensioning device

- ◆ Basic version
- ◆ Without extraction protection



Stroke:
200-300 mm

Pneumatic tensioning device

- ◆ With pneumatic control so as to ensure safe operation of the connection system in each position
- ◆ With extraction protection (intervention in chain hoist control required)



can be combined with:

- ◆ CAS
- ◆ AAS
- ◆ AAS-EF
- ◆ LAS

DISCHARGE AID: AUTOMATIC RESTRETCHING UNIT

In addition to the outlet tensioning device for poor-flowing and bridging products.

- ◆ During discharging, the FIBC becomes narrower and longer.
- ◆ Repeated tightening of the FIBC (automatic restretching of the holding fixture by the chain hoist), optimizes the discharge behaviour of the product and avoids bridging.
- ◆ This is possible by intervention into the chain hoist control (expensive in the case of an onsite chain hoist).
- ◆ An integrated extraction protection prevents the FIBC outlet from being pulled out of the connection system.
- ◆ Continuous monitoring of the discharging process by the staff is not necessary.

can be combined with:

- ◆ CAS
- ◆ AAS
- ◆ AAS-EF
- ◆ SAS
- ◆ LAS

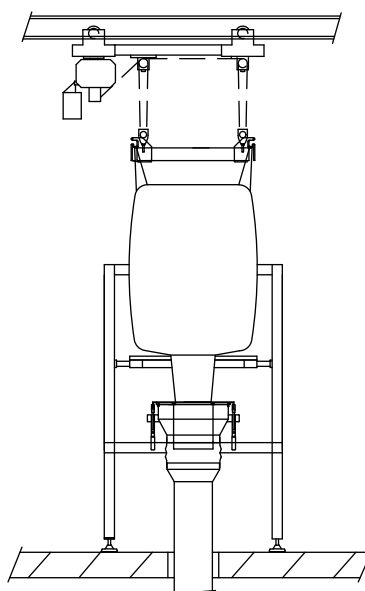


Fig.: FIBC discharge station without automatic restretching unit

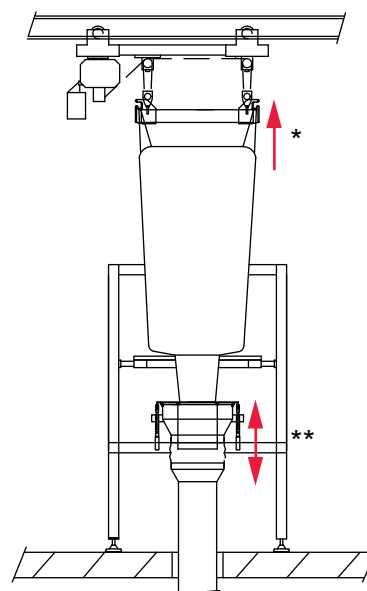
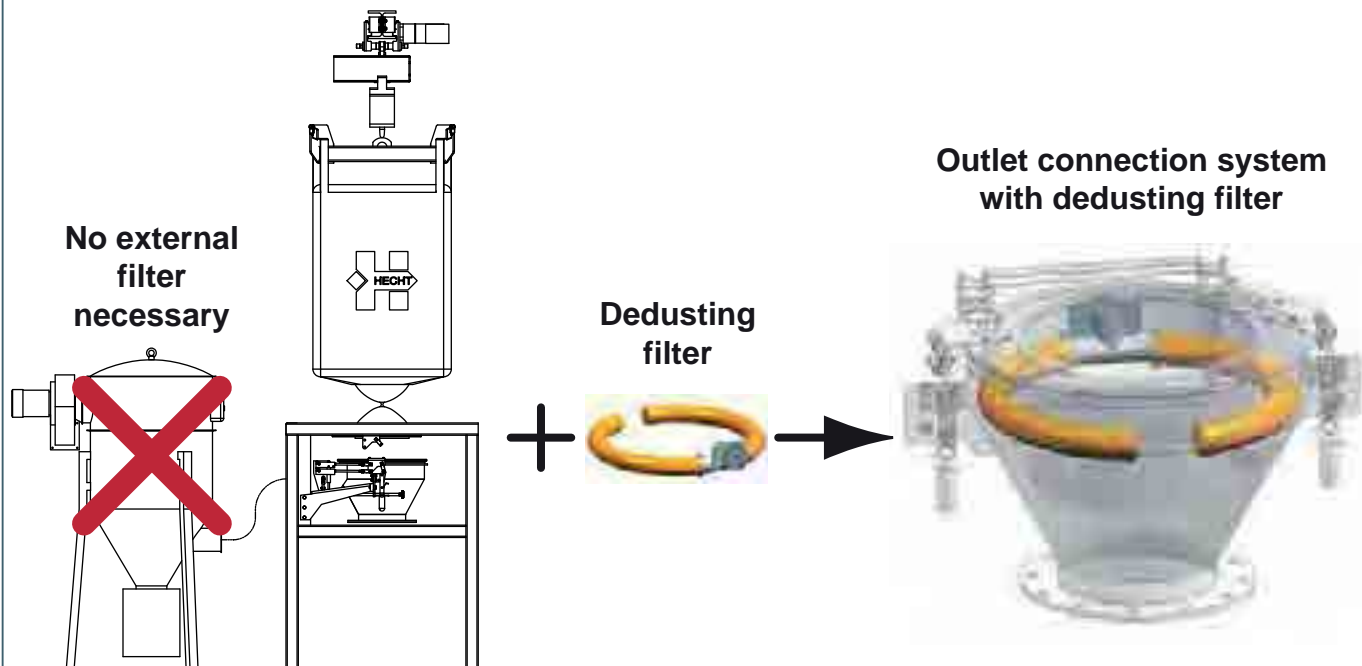


Fig.: FIBC discharge station with automatic restretching unit

- * ↑ FIBC is tightened (restretching unit)
- ** ↑ ↓ Movable connection system due to outlet tensioning device (stroke 200-300 mm)

DEDUSTING FILTER RETROFIT KIT

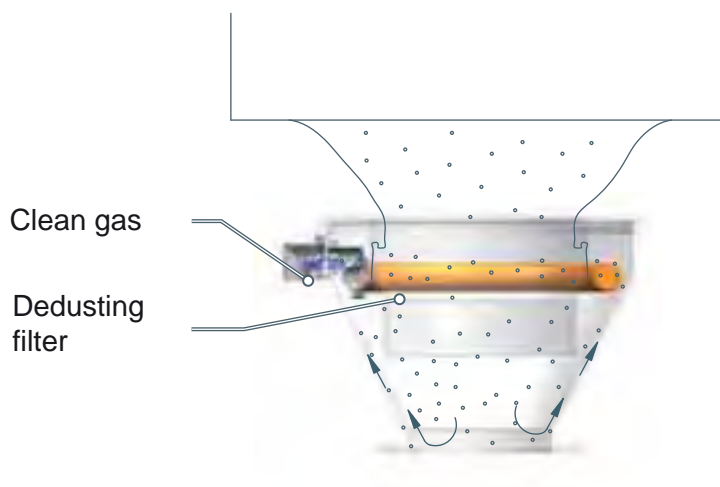


Outlet connection systems AAS for low-dust discharging of FIBCs have been used for 15 years now. For dedusting, external dedusting filters or central filter systems used to be connected until recently.

Now, there is a new patent pending development that reliably prevents product carryover or cross-contamination caused by external filters.

Dust is deposited in the connection system at a dedusting filter with pneumatic cleaning and thus remains inside the system without loss.

The *dedusting filter* can be fitted into existing outlet connection systems.



Higher benefit for the operator because there is:

- ◆ no product loss
- ◆ no carryover of product
- ◆ less cleaning effort
- ◆ less investment
- ◆ better hygiene

- ◆ Exhaustion optional
- ◆ Cleaning with compressed air: max. 3-4 bar