



# Flexible solutions for **BULK GOODS**

Silos | Containers | Plant construction | Discharge aids

# AREAS OF APPLICATION

Flexible A.B.S.-Silos and Containers made of very strong and durable high-tech polyester fabric are used all over the world. They are suitable for a wide range of various applications. Weights up to 50 tons and volumes up to 200 m<sup>3</sup> are no problem for our flexible silos.

A.B.S. Flex-Bins (silo, container) are in demand everywhere today where bulk goods need to be stored quickly, efficiently and safely.

The flexible A.B.S. storage systems are tailored to your specific requirements.



## FOR ALL KINDS OF BULK GOODS

Here you will find a list of bulk and piece goods. Your product is not on the list? No problem, because flexibility is our strength! We welcome your enquiry.

For the design of our storage systems A.B.S. uses an extensive bulk good database.

Active carbon	Dog food	Maize starch	Polystyrene (granulate)	Sugar (crystal)
Aluminium powder	Drops	Malt (dry)	Polystyrene (powder)	Tabacco leaves
Animal feed	EPP	Malt flour	Polystyrene beads	Tabacco powder
Apple pectin	EPS	Mixed herbs	Powder coating material	Talcum
Aroma substances	Ferric oxide	Nuts	Pumice (powder)	Tea
Bauxite	Fertiliser (granulate)	Oat flakes	PVC-Dry-Blend	TPE-Granulate
Biscuite mixtures	Fish flour	Oat flour	PVC-Powder	Urea
Bran	Fish food	Oats	Quartz sand	Vinyl resins (powder)
Calcium carbonate (granulate)	Flour	Onions (chopped)	Raisins	Vitamins
Cereals	Flush boxes	Packaging chips	Resin (powder)	Washing powder
Chalk (pulverised)	Fodder	Pepper corns	Rice	Wheat flour
Chocolate powder	Garlic powder	Perlite (stone)	Rubber (granulate)	Wood flour
Clay (dry)	Glass pearls	Phenolic resin (powder)	Salt	Zinc oxide
Coffee beans	Glue granulate	Pills raw mixture	Sawdust	
Coffee powder	Grass seeds	Plastic granulate	SBS	
Colour pigments components	Injection moulded	Plastic grist	Silica gel	
Cork (finely ground)	Kaolin (dry)	Plastic regrind	Silicon carbonate	You will find a list with further bulk goods on our website:
Dental cast	Limestone flour	Polyamide	Sodium carbonate	
	Maize chips	Polyester resin (flocks)	Starch (granulate)	
	Maize flour	Polyester strips	Starch (powder)	

[www.abs-silos.de](http://www.abs-silos.de)

# FLEX-SILOS

Tailor-Made Solutions

Flex-Silos are manufactured like a bespoke suit – shape, size and fabric can be adapted to suit your special requirements in a way that no other system can match.

## THE BENEFITS OF FLEXIBLE A.B.S.-SILOS

- Maximal space utilisation, i.e. large storage capacity with a low space requirement
- Can also be assembled in very inaccessible locations
- For companies which need to take the ATEX directives into account, A.B.S.-Flex-Silos and plant components can be designed according to the provisions of the ATEX directives
- Low own weight, which means that no complex foundations are required
- Unlike outdoor silos, no separate planning permissions or expensive foundations are required. In addition, there is nothing that detracts from the overall visual impression of the company building
- High rigidity values and load capacities: Seven-fold safety for seams and fabric
- Optimal discharge properties thanks to flexible walls
- Can also be fitted with effective discharge equipment
- The fabrics used are selected exactly in accordance with the requirements of your bulk goods
- For particular requirements, A.B.S. uses an **exclusive** special fabric
- No condensation, thus process reliability is increased
- Can be quickly dismantled and erected, allowing relocations at any time



# FLEX-CONTAINERS

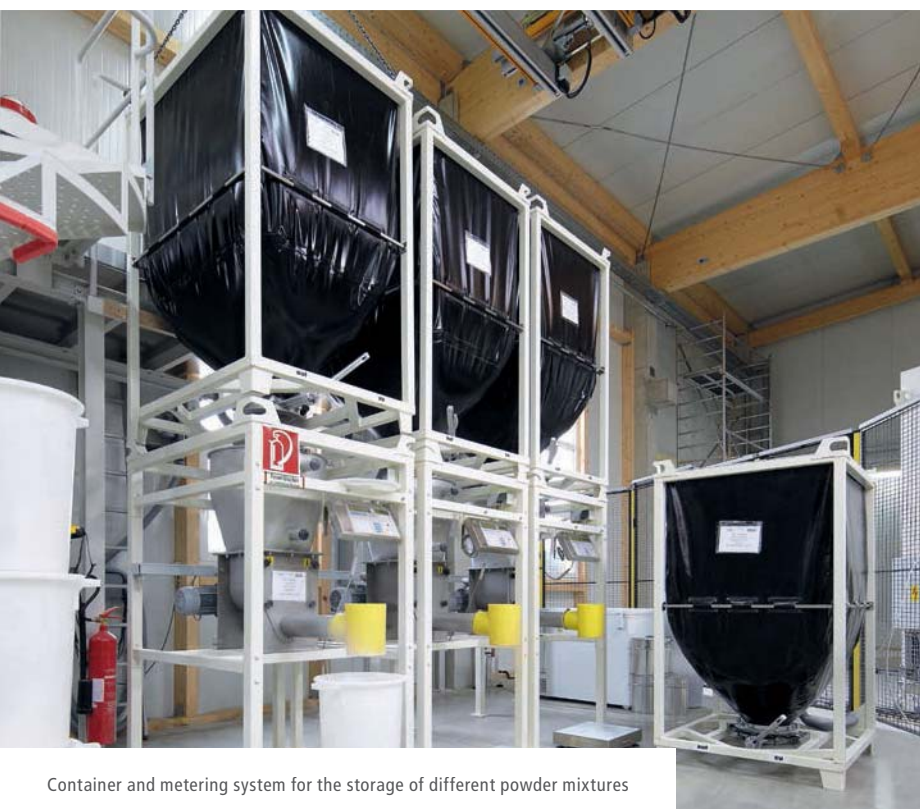
Flexible solutions  
for transport and temporary storage

A.B.S.-Flex-Containers allow optimal solutions for both internal and external logistics tasks. They are equally suitable for transport and temporary storage. Flex-Containers are available as standard with volumes ranging from 0.5 to 2 m<sup>3</sup>.



## THE BENEFITS OF FLEXIBLE A.B.S.-CONTAINERS

- Standard construction with stackable corners and feet as well as end-stop and transport aids for crane and truck operation
- Can be used either as mobile or stationary units depending on area of application and task
- Their stackability means that existing space height can be utilised maximally
- Free choice of shut-off and emptying devices
- Can also be fitted with effective discharge equipment
- The fabrics used are selected exactly in accordance with the requirements of your bulk goods
- For companies which need to take the ATEX directives into account, A.B.S.-Flex-Containers and plant components can be designed according to the provisions of the ATEX directives.



Container and metering system for the storage of different powder mixtures



# TURN-KEY PLANT CONSTRUCTION

Overall solutions with a system

The ability to provide personal customer support and detailed solutions demands many years of experience and know-how. We take the holistic approach by looking at the scope of work involved for each project and are tailoring the control system, filling level, weighing, conveying and dosing technology required to the complete storage system.

You receive an extensive storage concept from development through planning and design to installation, commissioning and service – everything from a single source.



Flexible silo plant for fresh foamed EPS – Volume per storage silo approx. 90 m<sup>3</sup>



Silos for granulate at a manufacturer of plastic packaging in Russia



# DISCHARGE AIDS

Highly effective and tested discharge aids for safe discharge

Discharge problems cause high costs through plant hold-up or incorrect mixtures. Safe discharge is guaranteed by the fitting or retrofitting of highly effective A.B.S. discharge aids, the characteristics of which are precisely adapted to the stored goods.

## Fliess-Ex® - ensures smoothness



Intelligent material combinations reduce the friction of the silo wall as well as in the cone area, thereby ensuring the greatest possible degree of smoothness on the outer walls

## Walk-Ex® - breaks down bulk good bridges



Periodic injection and extracting of air into the air-holding cone varies the geometry. Bulk good bridges are broken down and the bulk good flow out freely

## Fluid-Ex® - for a targeted injection



Fluid-Ex® consists of a highly flexible textile combination. With the help of Fluid-Ex® the air that escapes during storage is injected and so the bulk good become a well flowing material

## Pneum-Ex® - ensures a constant change of the silo cone



Multiple air bags arranged in the cone constantly change its profile and discharge angle, so that bridge formations are inhibited

## THE ADVANTAGES OF A.B.S.-DISCHARGE AIDS

- Guarantee safe discharge of the bulk good
- Kind to the stored goods (no grinding, no breaking)
- No inserted components extending into the silo, therefore easy to clean
- Retro-fitting possible in existing metal, wooden or concrete containers

Bulk good categories	Discharge properties	Example	Discharge aid
1	flows without restriction	Peas, Polystyrene, Plastic granulate,...	None
2	Flows with restriction	Rough cereal shred, Plastic grist,...	Silo and outlet cone made of flexible fabric
3	Sometimes forms bridges	Cereals, Oat flakes, Grass seeds,...	A.B.S.-Fliess-Ex® or A.B.S.-Walk-Ex®
4	Do not flow out, injected air allows the bulk goods to flow	Flour, Cocoa, Colour pigments, Talcum, Kaolin,...	A.B.S.-Fluid-Ex® or A.B.S.-Pneum-Ex®
5	Do not flow out, the bulk goods cannot be made to flow out	Rubber flour, Cork broken,...	A.B.S.-Walk-Ex® or A.B.S.-Fliess-Ex® or A.B.S.-Pneum-Ex®
6	Bulk goods stick or clump	Rubber granulate, Glue granulate,...	A.B.S.-Pneum-Ex <sub>1</sub>
7	When under pressure, the bulk goods lock	Mica lamella, Tealeaves,...	A.B.S.-Pneum-Ex <sub>2</sub>
8	Bulk goods felt strongly	Pomace, Plant material dried,...	A.B.S.-Pneum-Ex <sub>3</sub>
9	Bulk goods from wide-spanned bridges (e.g. up to 3 m)	Foil and Paper strips, Shredder wool,...	A.B.S.-Pneum-Ex <sub>4</sub>
10	Form bridges even in vertical walls	Stone wool, crushed Fibreglass,...	A.B.S.-Pneum-Ex <sub>5</sub>

1-5) with the application of Pneum-Ex® the number of required air hoses depends on the properties of the bulk good and silo size.



# WE GIVE THE BEST FOR OUR CUSTOMERS: TOP QUALITY

Tested quality fabric

The load capacity of the technical fabrics used by A.B.S. is constantly tested by the Research Institute Hohenstein and for the last decades has convinced with at least seven-fold safety for seams and fabric.



## THE ADVANTAGES OF OUR FABRICS

A.B.S. offers the suitable fabric for the individual application:

- Breathable fabrics
- Air tight versions
- Numerous variants of coated and uncoated fabrics
- Fabrics approved for the food sector
- Versions with anti-static properties thanks to a special interwoven thread

We are also the right point of contact if legal provisions, such as the ATEX directives (Explosion protection), need to be observed.



Only A.B.S. uses  
an exclusive  
TechnoTex fabric.





## A strong team with more than **35 years of experience**

More than 70,000 installed A.B.S. Flex-Silos throughout the world give you the safety of having found the competent partner for your project. As experts for flexible installation systems, our team know exactly what is important!

Our team is happy to advise you with regard to planning your silo system and give you some tips and make suggestion on how you integrate A.B.S. bins into your workflow while making maximum use of the available space. This can save time and a lot of money.



## How to reach us:

**A.B.S.**  
**Silo- und Förderanlagen GmbH**

Industriepark 100  
74706 Osterburken - GERMANY

Phone +49 6291 6422-0  
Fax +49 6291 6422-50  
info@abs-silos.de

[www.abs-silos.de](http://www.abs-silos.de)

