

**RELIABILITY IS ESSENTIAL**  
**100% quality for your success**



**Bulk material handling components**

# ENGINEERING YOUR SUCCESS



Zeppelin Systems, the world leading plant manufacturer for high quality bulk material handling, has remarkably grown over the past 60 years. We cover the demands of a wide range of industries and supply all plant manufacturing services from one single source, whether basic engineering, in-house production of components, final assembly or comprehensive customer service. Thanks to our financial strength and our global network, we have long been a reliable partner for our customers.

Every Zeppelin plant is developed according to the clients' specific requirements, and realized, thanks to our customized innovative processes and technologies.

The knowledge we have acquired over more than 60 years of plant manufacturing and the world's largest network for bulk material handling is the key to providing ideal solutions, whatever the challenge; after all, your success is our goal.

## Zeppelin plant engineering – business fields

### **Polyolefin Plants**

Plants for plastics producers and forwarders

### **Plastics & Rubber Plants**

Plants for the plastics processors and rubber industry

### **Food Processing Plants**

Plants for the food, confectionery and baking industry

### **Mixing Technology**

HENSCHL-Mixers®, mixing systems

### **Silos**

Storage silos, mixing silos, process silos

### **Components**

Rotary feeders, diverter valves, discharge and dosing units, sifters, filters ...

### **Service**

Spare parts, customer service and consulting

### **Modernization/Revamping**

Optimization of production lines and plant controls





EXCEPTIONAL

# BULK MATERIAL HANDLING COMPONENTS

FOR THE BEST PLANTS

**Only the best:** More than 60 years of experience with premium bulk material; the expertise of one of the world's leading plant manufacturers; the assurance of fully documented quality through in-house production; passionate employees who can technically implement our customers' needs and requirements with maximum functionality and excellence.

## The whole works for all applications

- Rotary feeders
- Diverter valves
- Rotary sifters
- Vibratory cones and bottoms
- Filters
- Vacuum hoppers
- Fluidizing beds
- Discharge and dosing module KOKEISL
- Dosing and feeding screws
- Samplers

Whether for the food or rubber industries, for plastics producers or processors – high-quality components play a crucial role. We know that and this is why we supply components 100% handcrafted by Zeppelin.

## Zeppelin quality – one you can rely on

We develop and manufacture all components that have an influence on the quality of your bulk material ourselves. From test series in our technology centers to design and production through to first-class service, we do what is necessary to meet your high demands in regards to functionality.

The whole knowledge of the company is applied already in the development of the components. Thanks to the close contact to our customers around the world, we are always a step ahead in technological trends. When it comes to developing new processes or optimizing current ones, one name is at the top of the list: Zeppelin.



Complex Zeppelin process technology  
with self-made key components



Vibratory cone and bottom



Aeration cone



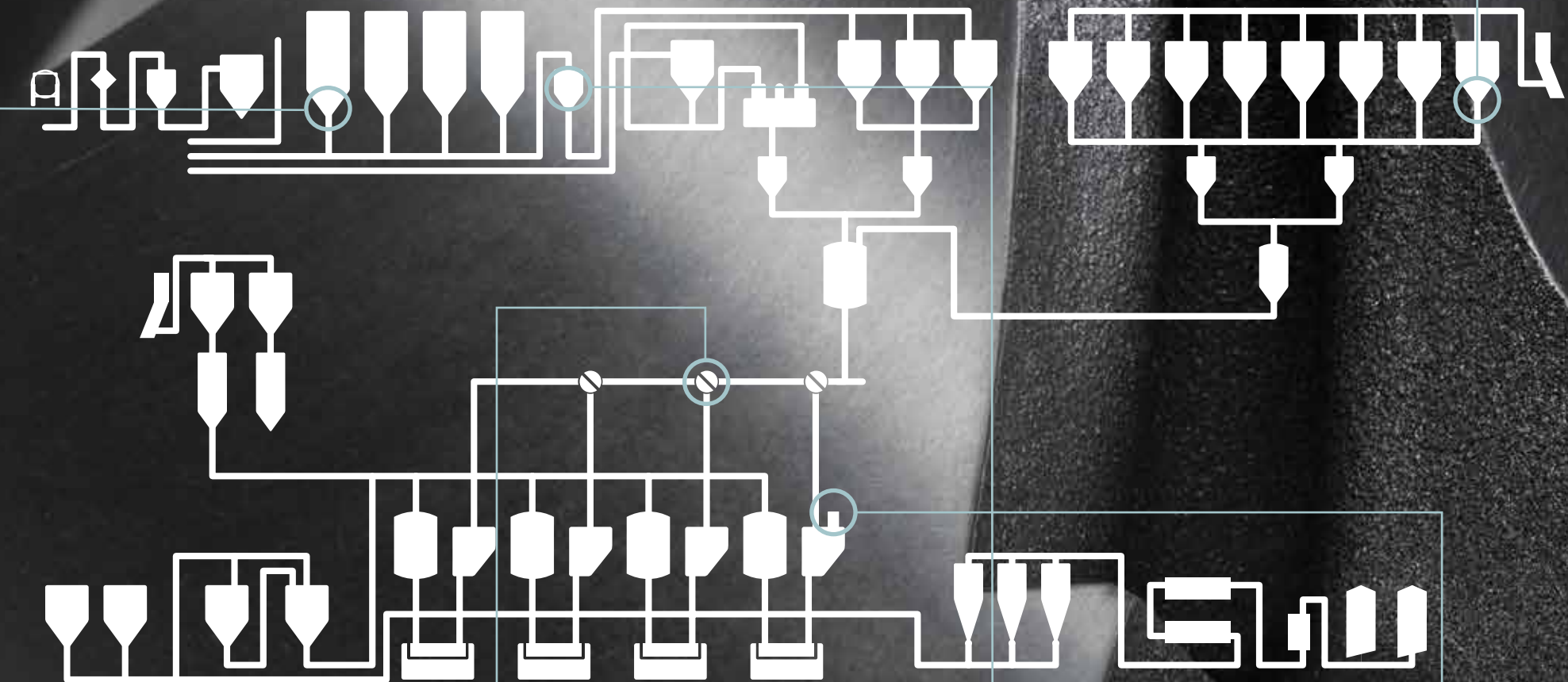
Fluidizing bed



KOKEISL



Dosing and conveying screw



Rotary feeder



Diverter valve



Rotary sifter



Filter



Components

## ROTARY FEEDERS

**Zeppelin rotary feeders transport the customers' bulk material from the containers and silos into the pneumatic conveying system. Particular attention is paid to detail so that everything runs smoothly. This is why we provide our customers with the optimal rotary feeder for every task – whether for powders or pellets. High degree of filling, ideal sizes, friendly product handling, innovative sealing systems, minimal leakage – perfection you can rely on.**

Application overview						Low pressure		Medium pressure	High pressure	Purge gas	Recommended material				Rotor design									
						Discharge rotary feeder A1		Discharge rotary feeder AG11	Blow through rotary feeder D	Medium pressure rotary feeder CFM	High pressure rotary feeder CFH		Housing/side plates <sup>1</sup>				Rotor		Tips not beveled Square tips trilaterally beveled Square tips trilaterally beveled with stiffener					
						Stainless steel		Stainless steel chilled casting		Gray cast iron	Cast aluminium		Carbon steel	Stainless steel										
Max. differential pressure [bar (g)]						1.0	1.0	1.0	1.5	3.5														
Products																								
Pellets																								
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS						✓			✓	✓		✓				✓	✓	✓						
PC, PET						✓			✓	✓		✓	✓*				✓	✓	✓					
Powder																								
S-PVC, E-PVC, silica, silica acid, chalk, compound PVC, PE, PP						✓		✓	✓	✓	✓	✓	✓				✓	✓	✓					
PTA, titanium dioxide*						✓		✓	✓	✓	✓	✓	✓					✓	✓	✓				
Carbon black						✓		✓	✓	✓	✓	✓	✓				✓	✓	✓					
Food																								
Flour						✓		✓	✓	✓	✓	✓	✓				✓	✓	✓					
Starch						✓		✓	✓	✓	✓	✓	✓				✓	✓	✓					
Sugar						✓		✓	✓	✓	✓	✓	✓ <sup>3</sup> ✓				✓	✓	✓ ✓ <sup>2</sup>					
Minerals/abrasives																								
SAP (superabsorber)						✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓					
Powdered limestone						✓	✓	✓				✓	✓				✓	✓	✓					
Sawdust						✓	✓	✓				✓	✓ <sup>4</sup>				✓	✓	✓					
Cement						✓	✓	✓				✓	✓ <sup>4</sup>				✓	✓	✓					
Design											<div><sup>1</sup> Different material combinations of housing and side plates only possible for CFH series</div> <div><sup>2</sup> For powdered sugar</div> <div><sup>3</sup> Durni coated</div> <div><sup>4</sup> Tungsten carbide coating</div> <div><sup>5</sup> Only for sizes up to 320</div> <div>* Please contact our sales components department</div>													
Discharge						✓	✓		✓	✓														
Blow-through								✓																
Extras																								
Heating/cooling									✓	✓														
Quick cleaning						✓	✓	✓		✓*														
Flameproof (protective organ)						✓ <sup>5</sup>	✓ <sup>5</sup>	✓ <sup>5</sup>																
ATEX design						✓	✓	✓	✓	✓														



### Rotary feeders animation





Low pressure  
rotary feeders

Discharge rotary feeder A1/AG11



Blow through rotary feeder D



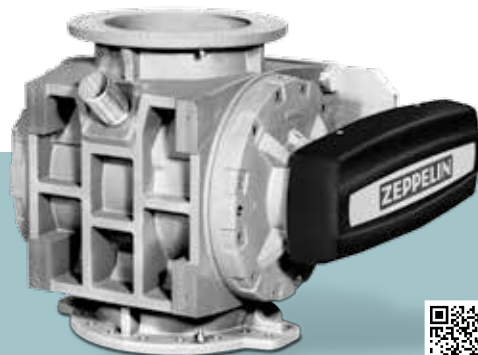
Medium pressure  
rotary feeders

Medium pressure rotary feeder CFM



High pressure  
rotary feeders

High pressure rotary feeder CFH



Application	Used for dosing bulk material and as feeding device in pneumatic dilute phase conveying systems	For feeding bulk material into pneumatic dilute phase conveying systems	Used for dosing bulk material and as feeding device in pneumatic dilute phase conveying systems	For feeding into pneumatic dilute and dense phase conveying systems or for feeding and discharge of bulk material in processing plants
Bulk materials	Powder, pellets	Powder	Powder, pellets	Powder, pellets
Operating pressure	-1.0 to +1.0 bar (g)	-1.0 to +1.0 bar (g)	-1.0 to +1.5 bar (g)	-1.0 to +3.5 bar (g)
Temperature range	10 to +60°C (standard)	-10 to +60°C (standard)	-10 to +60°C (standard)	-10 to +60°C (standard)
Optional	-52 to +250°C	-52 to +250°C	-52 to +250°C	-52 to +250°C
Sizes	160 to 500 mm	160 to 500 mm	200 to 750 mm (160 from 2017)	200 to 850 mm (160 from 2017)
Capacities	2.6 to 87 L	2.6 to 87 L	7 to 280 L	6.5 to 400 L
Materials	Aluminium/stainless steel/gray cast iron	Aluminium/stainless steel/gray cast iron	Aluminium/stainless steel	Aluminium/stainless steel
Accessories	Chain drive Optional: Direct drive, leakage gas collector, feeding chutes, support frame, quick cleaning version, support frame, flame-proof (sizes 160 – 320), additional accessories upon request	Chain drive Optional: Direct drive, leakage gas collector, support frame, quick cleaning version, ATEX design, flame-proof (sizes 160 – 320), additional accessories upon request	Chain drive Optional: Direct drive, leakage gas collector, feeding chutes, support frame, ATEX design, additional accessories upon request	Chain drive Optional: Direct drive, leakage gas collector, feeding chutes, support frame, ATEX design, additional accessories upon request

# DIVERTER VALVES

With Zeppelin diverter valves, your product is always on the right track. We know the ways best. Whether rectangular shaped or symmetrical, our diverter valves are flexible and can be tailored on demand to the customer needs. Here too, our customers’ bulk materials are given top priority and are handled with care by Zeppelin components. We have designed sealing systems that reduce maintenance work to a minimum and developed hardened inserts that increase the service life. You can rely on our proven premium quality and maximum efficiency in daily operations.

Application overview				Low pressure	High and medium pressure		Medium pressure	Inflatable Seal	Recommended material						
				Diverter valve ZWV	Diverter valve TST	Diverter valve VST	Two-way diverter valve ZWR	Two-way hose-type diverter valve ZWS	Three-way hose-type diverter valve DWS		Housing  Cast aluminium	Rotary plug  Cast aluminium	Insert rotary plug  Stainless steel 1.4301	Insert flange  Stainless steel 1.4571	
Maximum operating pressure** [bar (g)]				1.5	6.0	6.0	6.0	4.0	4.0						
Products															
Pellets															
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS				✓	✓	✓	✓	✓	✓		✓	✓	✓		
PC, PET				✓	✓	✓	✓				✓	✓	✓	✓	
Powder															
S-PVC, E-PVC, silica, silica acid, chalk, compound PVC, PE, PP					✓	✓	✓			✓	✓	✓	✓		
PTA					✓	✓	✓			✓	✓	✓	✓	✓	
Titanium dioxide*					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Carbon black					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Food															
Flour				✓	✓	✓	✓			✓	✓	✓	✓		
Starch				✓	✓	✓	✓			✓	✓	✓	✓		
Sugar				✓	✓	✓				✓	✓	✓	✓		
Minerals/abrasives															
SAP (superabsorber)							✓			✓	✓	✓	✓	✓	
Powdered limestone							✓	✓	✓	✓	✓	✓	✓	✓	
Sawdust							✓			✓	✓	✓	✓	✓	
Cement								✓	✓	✓	✓	✓	✓	✓	
Coal dust							✓			✓	✓	✓	✓	✓	
Design									* Please contact our sales components department  ** In the active leg						
Directing valve				✓	✓	✓	✓	✓							✓
Collecting valve				✓	✓	✓	✓	✓							✓
Hose valve								✓							✓
Wear resistant							✓	✓							✓



Diverter valves animation





Low pressure  
diverter valves

Two-channel diverter valve  
Diverter valve ZWV

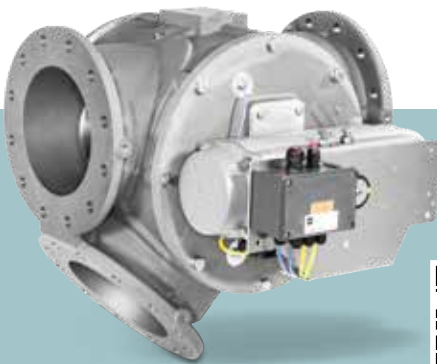


High and medium  
pressure diverter valves

Single channel diverter valve  
Diverter valve TST



Single channel diverter valve  
Diverter valve VST



Application	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes
Bulk materials	Powder, pellets	Powder, pellets, specifically for silo feeding	Powder, pellets
Operating pressure	-1.0 to +1.5 bar (g) (to 4.0 bar (g) from 2017)	-1.0 to +6.0 bar (g)	-1.0 to +6.0 bar (g)
Temperature range	-20 to +120°C (standard)	-20 to +120°C (standard)	-20 to +120°C (standard)
Option with heating system	—	-52 to +180°C	-52 to +180°C
Diverting angle	35°	90°	45°
Sizes (diameters)	56 to 163 mm	100 to 350 mm	100 to 350 mm
Materials	Housing aluminium, parts in contact with product stainless steel/ rotary plug cast aluminium with stainless steel pipe	Housing aluminium/rotary plug with stainless steel insert Housing with stainless steel insert (from 2017) (150/188/200)	Housing aluminium/rotary plug with stainless steel insert Housing with stainless steel insert (from 2017) (150/188/200)
Accessories	ATEX design, additional accessories upon request	Optional: ATEX design, inflatable seal, additional accessories upon request	Optional: ATEX design, inflatable seal, additional accessories upon request





High and medium pressure  
diverter valves

Single channel diverter valve, wear resistant  
Diverter valve ZWR



Application	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes
Bulk materials	Powder, pellets, abrasive products
Operating pressure	-1.0 to +6.0 bar (g)
Temperature range	-10 to +80°C (standard)
Optional	-52 to +180°C
Diverting angle	35°
Sizes (diameter)	50 to 250 mm
Materials	Housing aluminium/parts in contact with product stainless steel
Accessories	Inflatable seal, Optional: ATEX design, wear protected stainless steel insert, additional accessories upon request

Medium pressure  
diverter valves

Two-way hose-type diverter valve ZWS



Application	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes
Bulk materials	Powder, pellets, adhesive powders with poor flowability
Operating pressure	-1.0 to +4.0 bar (g)
Temperature range	-10 to +80°C (standard)
Optional	—
Diverting angle	2 outputs
Sizes (diameter)	50 to 225 mm
Materials	Housing aluminium/stainless steel inserts
Accessories	Optional: ATEX design, additional accessories upon request

Three-way hose-type diverter valve DWS



Application	Diverter valve for directing or converging the product flow in pneumatic conveying systems and gravity pipes
Bulk materials	Powder, pellets, adhesive powders with poor flowability
Operating pressure	-1.0 to +4.0 bar (g)
Temperature range	-10 to +80°C (standard)
Optional	—
Diverting angle	3 outputs
Sizes (diameter)	50 to 225 mm
Materials	Housing aluminium/stainless steel inserts
Accessories	Optional: ATEX design, additional accessories upon request

# DISCHARGE AND DOSING

Fluidizing beds, aeration  
cones and vibratory  
cones/bottoms

Trouble-free is best – and this is achieved by  
providing our customers’ products with the right  
assistance. Reliable, tried and tested – perfect!

## Discharge and dosing module KOKEISL

The exact amount is key – mostly in the food and  
plastics industries. The KOKEISL technology:  
innovative and ideal for a reliable discharge and  
precise dosing of bulk material with poor flow-  
ability. Don’t go for less – after all, your product’s  
formula is your capital!

## Dosing and conveying screws

Perfectly in motion – the Zeppelin dosing and  
conveying screws are the ideal components for  
dosing and transporting your bulk material. They  
can be used in conveying systems as well as for  
precise scale dosing. 100% stainless steel, easy  
to clean, precise conveying and dosing – 100%  
Zeppelin!

Application overview	Discharge hoppers			Discharge modules		Conveying screws
	Aeration cone BTS	Vibratory cone VT/ vibratory bottom VB	Fluidizing bed FB	Discharge module KOKEISL KA	Discharge and dosing module KOKEISL KAD	Dosing and conveying screw DS
Products						
Pellets						
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS						✓
PC, PET						✓
Powder						
S-PVC, E-PVC, silica, silica acid, chalk, compound PVC, PE, PP	✓	✓		✓	✓	✓
PTA, titanium dioxide*	✓	✓		✓	✓	✓
Carbon black	✓	✓		✓	✓	✓
Food						
Flour		✓	✓	✓	✓	✓
Starch		✓	✓	✓	✓	✓
Sugar		✓	✓	✓	✓	✓
Minerals/abrasives						
SAP (superabsorber)		✓				✓
Powdered limestone		✓		✓	✓	
Sawdust		✓		✓	✓	✓
Cement		✓		✓	✓	
Coal dust		✓		✓	✓	

\* Please contact our sales  
components department



Discharge and dosing module KOKEISL KA/KAD  
Animation



Aeration cone BTS



Vibratory cone/  
vibratory bottom VT/VB



Fluidizing bed FB



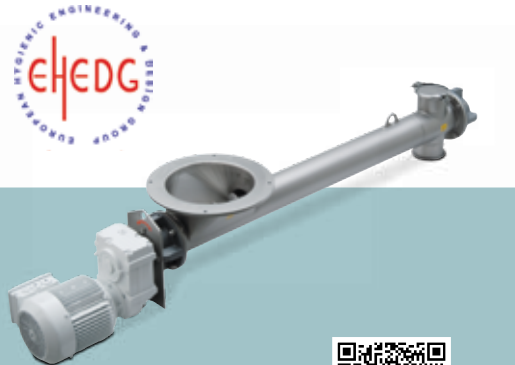
FB



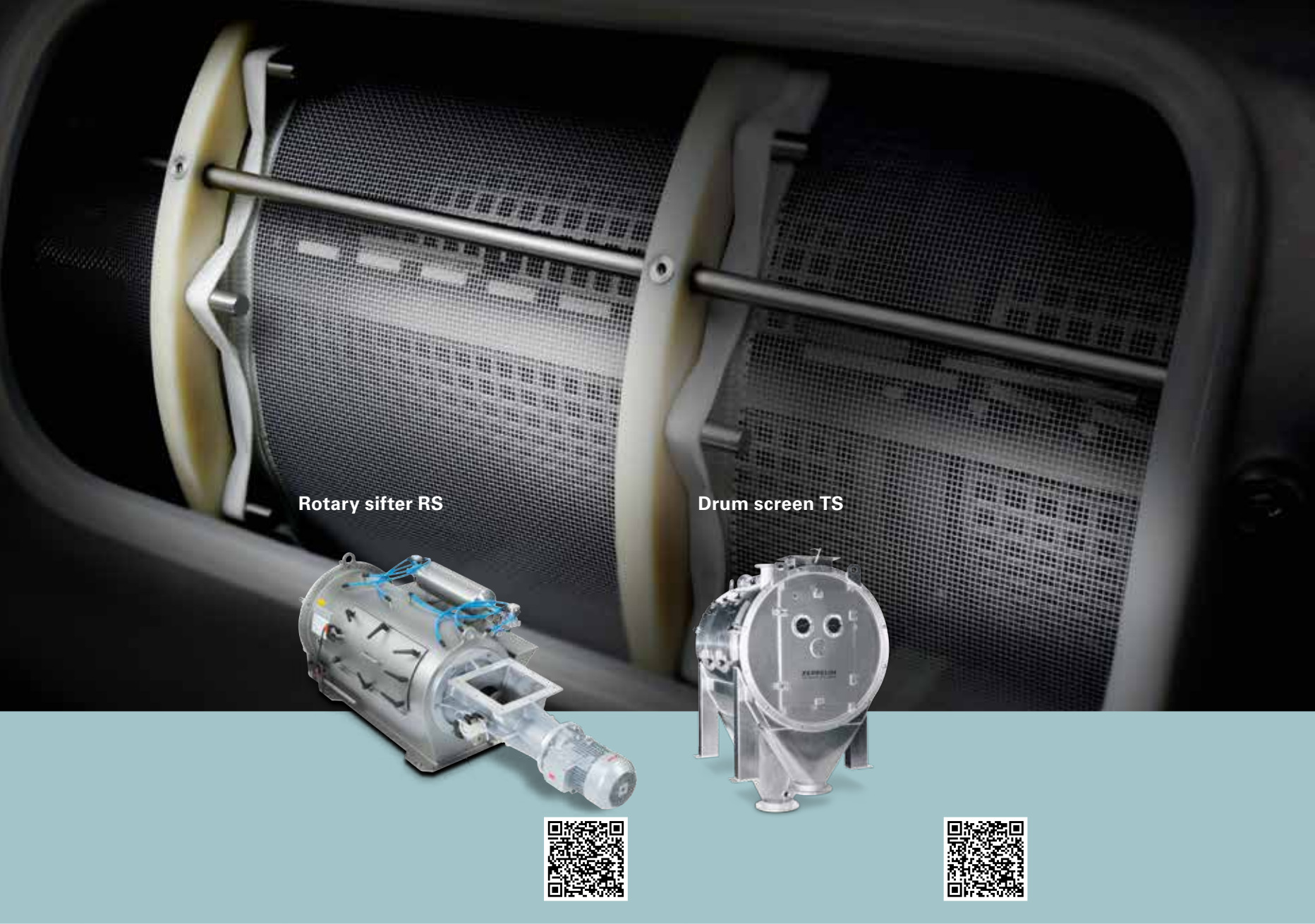
Discharge and dosing module  
KOKEISL KA/KAD



Dosing and conveying screw DS



Application	Cone with discharge aid for non-free flowing bulk material by fluidization. Combined with mechanical movement of the fluidizing cloth		Activating the product flow and conveying bulk material with poor flowability		Pneumatic fluidization system for a gentle discharge of well fluidizable bulk material		Filling and dosing various bulk materials out of silos and containers to other containers		Dosing and conveying of dry, powdery and pelletized bulk material and feeding of scales	
Bulk materials	Powder, pellets		Powder, pellets		Powder		Powder, pellets		Powder, pellets	
Operating pressure	-5 to +45 mbar		–		Max. 0.6 bar with side channel blower and membrane flaps Fluidizing valves: control pressure 1.6 bar		Atmospheric pressure, others upon request		Atmospheric pressure	
Temperature range	-10 to +80°C		-10 to +80°C		-20 to +60°C		-10 to +40°C		-20 to +40°C	
Hopper inclination angle	60°		90°		60°                      110°		Throughput: 0 to 10                      0 to 25                      0 to 45 m³/h		Lengths: 500 to 8000 mm, longer upon request	
Sizes (diameter)	600 to 1400 mm		600 to 1800 mm (VT up to 1500 mm)		640 to 1276                      960 to 2220 mm		90                      150                      200 mm		80 to 300 mm, optionally with 1 or 2 outlets	
Outlet diameter	150 to 500 mm		180 and 250 mm		230 mm		Motor power: 0.25                      0.37                      0.55 kW		80 to 500 mm	
Materials	Aluminium		Stainless steel		Steel painted, sinter plates made of PE or stainless steel		Housing aluminium, parts in contact with product stainless steel or electropolished		Stainless steel	
Accessories	Pressure tank, valves Optional: ATEX design		Optional: shock-pressure resistant design, ATEX design, shut-off valve		Optional: ATEX design		Inlet cone, outlet cone Optional: dosing control, FDA approved seal, ATEX design		Optional: cleaning flap starting from DS 100, bearing purge gas, speed control, ATEX design	



Application	As preliminary sieve before silos or bag filling stations, as final sieve underneath containers or as inline sifter for pressure-tight operations in pneumatic conveying systems			For continuous separation of streamers (angel hair) and agglomerates from plastic pellets			
Bulk materials	Powder, pellets			Pellets			
Operating pressure	-0.5 to +0.8 bar (g)			–			
Temperature range	-20 to +40°C			–			
Sizes (L x W x H)	3 1686 x 430 x 480		7 2044 x 600 x 690 mm	1000 3300 x 1400 x 2100	1400 4100 x 1800 x 2750	2000 4800 x 2500 x 3550	2800 5500 x 3200 x 5200 mm
Inlet connection	square 250 x 250 mm			–			
Mesh size	Wedge wire 0.6 to 1.0	Plastic mesh 0.6 to 4.0	Perforated sheet 2.5 to 14 mm	–			
Materials	Machine housing and parts in contact with product stainless steel/inlet housing and lid aluminium/screen cloth plastic, wedge wire screen or perforated sheet stainless steel			Housing aluminium/ drum screen stainless steel 1.4301, sanded or electropolished			
Accessories	Inspection lid right or left side for RS 7 Optional: sifter drum purge system, sifter drum monitoring Screen-D-Tect, fine material collecting cone, cyclone, coarse material outlet with shut-off valve, double valve, support frame, ATEX design			Throughput up to 120 t/h, flange drill pattern according to DIN 2501, PN 10, ANSI 150# or client's standard			

## ROTARY SIFTERS

Everything under control. Zeppelin rotary sifters are the ideal tool for processing bulk material. They can be used as preliminary sieve before silos, as final sieve underneath bag filling stations and containers or as inline sifter for pressure-tight operations up to 0.8 bar (g) in pneumatic conveying systems. Our rotary sifters ensure reliable removal of foreign matter and precise particle size verification.

Application overview		
	Rotary sifter RS	Drum screen TS
Products		
Pellets		
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS	✓	✓
PC, PET	✓	✓
Powder		
S-PVC, E-PVC, silica, silica acid, chalk, compound PVC, PE, PP	✓	
PTA, titanium dioxide*	✓	
Carbon black	✓	
Food		
Flour	✓	
Starch	✓	
Sugar	✓	
Minerals/abrasives		* Please contact our sales components department
SAP (superabsorber)	✓	
Special equipment		
Sifter drum purge system	✓	✓
Sifter drum monitoring Screen-D-Tect	✓	



Rotary sifters animation



# FILTERS

The aim of our filter systems: exceed our customers’ expectations. Whether with our conventional filter product range or with jet venting filters – pure air is sustainable. We know this and we can do it. You tell us your parameters and we will provide you with the matching system.

Application overview	Jet filter				Filter element finish	
	Jet silo venting filter AE	Jet venting filter JEB/JS	Jet vacuum filter UEB/US	Shock pressure resistant jet venting filter DEB/DS	Aluminium coating	PTFE membrane or PTFE coating
Products						
Pellets						
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS	✓	✓	✓	✓	✓	✓
PC, PET	✓	✓	✓	✓	✓	✓
Food						
Flour	✓	✓	✓	✓	✓	✓
Starch	✓	✓	✓	✓	✓	✓
Salt	✓	✓	✓	✓	✓	✓
Sugar	✓	✓	✓	✓	✓	✓ <sup>2</sup>
Minerals/abrasives						
SAP (superabsorber)				✓	✓	✓
Powdered limestone				✓	✓	✓
Sawdust				✓	✓	✓
Cement				✓	✓	✓
Coal dust				✓	✓	✓
Filter elements						
Pleated cartridges	✓	✓	✓	✓	<sup>2</sup> For powdered sugar	
Filter bags		✓	✓	✓		
Replacement on raw gas side		✓	✓	✓		
Replacement on clean gas side	✓					
Extras						
Automatic jet cleaning	✓	✓	✓	✓		
Differ. pressure measurement	✓	✓	✓	✓		
Shock-pressure resist. up to 1 bar	✓			✓		
Vaccum operation			✓			



Jet silo venting filter AE



Jet venting filter JEB/JS



Jet vacuum filter UEB/US



Jet venting filter DEB/DS (shock pressure resistant)



Application	For the continuous filtering of pneumatic conveying air from continuously operating hoppers and silos		For the continuous filtering of pneumatic conveying air from continuously operating hoppers and silos					For the continuous filtering of pneumatic conveying air from continuously operating hoppers and silos					For the continuous filtering of pneumatic conveying air from continuously operating hoppers and silos					
Bulk materials	Powder, pellets		Powder, pellets					Powder, pellets					Powder, pellets					
Operating pressure	0 to +0.1 bar (g)		0 to +0.1 bar (g)					-0.5 to +0.03 bar (g)					-0.5 to + 1.0 bar/1.2 bar upon request					
Temperature range	-20 to +60°C		-20 to +60°C					-20 to +60°C					-20 to +60°C					
Sizes (housing diameter)	795	955 mm	JEB JS	400 –	650 650	800 800	950 mm 950 mm	UEB US	400 –	650 650	800 800	950 mm 950 mm	DEB DS	404 404	636 636	795 795	955 955	1272 mm 1272 mm
Filter surface	22.5	30.0 m²	JEB JS	4.0/6.4 –	9.8/16.8 2.3/3.2/4	14/24 3.5/4.9/6.2	21/35 m² 5.6/7.6/9.6 m²	UEB US	4.0/6.4 –	10.5/17.5 2.3/3.2/4	15/25 3.5/4.9/6.2	21/35 m² 5.6/7.6/9.6 m²	DEB DS	6.4 1.0/1.4	14.4 2.3/3.2/4	22.4 4.9/6.2/7.5	35.2 7.6/9.6/11.8	64 m² 13.9/17.6/21.4 m²
Cartridges	Cartridges with clamping fixture 9 12 Filter bags with clamping fixture 9 12		Cartridges with bayonet joint JEB 4 7 10 14 Filter bags with bayonet joint JS – 9 14 22					Cartridges with bayonet joint UEB 4 7 10 14 Filter bags with bayonet joint US – 9 14 22					Cartridges with bayonet joint DEB 4 9 14 22 40 Filter bags with bayonet joint DS 4 9 14 22 40					
Materials	Housing stainless steel, pleated cartridges antistatic polyester felt with or without PTFE coating		Housing stainless steel JEB Pleated cartridges antistatic polyester felt with aluminium or PTFE coating JS Filter hoses antistatic polyester felt with or without PTFE coating					Housing stainless steel UEB Pleated cartridges antistatic polyester fabric with aluminium or PTFE coating US Filter hoses antistatic polyester felt with or without PTFE coating					Housing stainless steel DEB Pleated cartridges antistatic polyester fabric with aluminium or PTFE coating DS Filter hoses antistatic polyester felt with or without PTFE coating					
Accessories	ATEX design, automatic jet cleaning Optional: differential pressure measurement, shock pressure resistant up to 1.0 bar, sound insulation		ATEX design, automatic jet cleaning Optional: differential pressure measurement, fan on filter head, weather hood					ATEX design, automatic jet cleaning Optional: differential pressure measurement					ATEX design, automatic jet cleaning Optional: differential pressure measurement					



## OTHER COMPONENTS

### Samplers

Make an example out of the sample – no problem with our samplers. Reliable results and quality control from the product stream or the hopper.

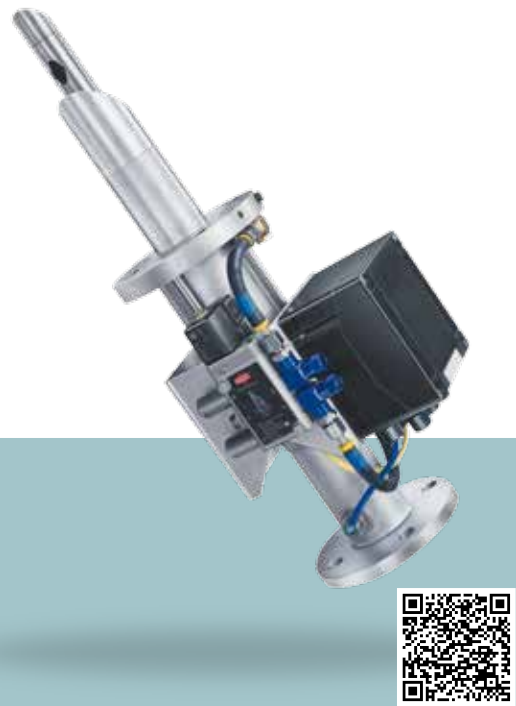
### Vacuum hopper loaders

Particularly suitable for powdery products: the driving force in your system. Thanks to its large filter surface, the vacuum hopper loader ensures reliable product flow.



Application overview	Sampler		
	Sampler GC	Sampler MPN	Universal vacuum hopper loader SFG
<b>Products</b>			
<b>Pellets</b>			
ABS, EPDM, HDPE, LDPE, LLDPE, PA, PBT, PP, PS	✓		✓
PC, PET	✓		✓
<b>Powder</b>			
S-PVC, E-PVC, silica, silica acid, chalk, compound PVC, PE, PP		✓	✓
PTA, titanium dioxide		✓	✓
Carbon black		✓	✓
<b>Food</b>			
Flour		✓	✓
Starch		✓	✓
Salt	✓	✓	✓
Sugar	✓	✓	✓
<b>Minerals/abrasives</b>			
SAP (superabsorber)		✓	✓
Powdered limestone		✓	✓
Sawdust		✓	✓
Cement		✓	✓
Coal dust		✓	✓
<b>Extras</b>			
ATEX design	✓	✓	

Sampler GC



Sampler MPN



Universal vacuum hopper loader SFG



Application	Sampling from conveying pipes		Sampling from the product stream, hoppers and gravity pipes	
Bulk materials	Pellets		Powder, pellets	
Operating pressure	to +1.0 bar (g)		to +1.0 bar (g)	
Temperature range	-20 to +80°C		-20 to +80°C	
Max. temperature version	100 to 180°C			
Sizes (diameter)	50	100 mm	50	80 mm
Stroke length			105	140/ 220/ 385 mm
Performance	Max. throughput for free-flowing pellets 0.2 5 m³/h		Volume per stroke 50 200 cm³	
Materials	Parts in contact with product stainless steel		Stainless steel	
Accessories	Pneumatic operation Optional: ATEX design, high-temperature version, controls, additional accessories upon request		Pneumatic or manual operation Optional: ATEX design, high-temperature version, controls, additional accessories upon request	

Application	For automatic feeding of extruders, processing machines, hoppers and storage silos		
Bulk materials	Powder, pellets/flakes with high powder content		
Operating pressure	-0.5 to +0.05 bar (g)		
Temperature range	-10 to +80°C		
Sizes	2	3	6
Filter surface cartridge	2.2	4.4	8.8 m²
Filter surface hose	0.6	1.3	2.7 m²
Performance (bulk density 600 kg/m³)	approx. to 1000	to 1300	to 2500 kg/h
Bulk materials	Stainless steel		
Accessories	Optional: ATEX design, controls, vacuum pump, additional accessories upon request		





## ALWAYS IN GOOD HAND

Zeppelin offers you a comprehensive carefree package that has no equal in the industry. From product development and production to specialist advice through to our on-site teams and first-class range of services – you are always on the safe side with Zeppelin.

This promise is valid worldwide, since an outstanding technology alone does not make you successful internationally. For that, you also need excellent employees that are able to meet the local requirements and make use of our worldwide expertise.

Welcome to Zeppelin.





# MAINTAIN THE ADVANTAGE

Technological leadership is associated with a lot of research and development work. That is why we have the world's largest network for bulk materials. Our customers can test their formulas or carry out various plant optimization tests in four different technology centers. There, new products are developed, plant layouts are verified and processes are optimized. This is what ensures our – and your – technological lead.



## **Friedrichshafen, Germany**

One technology center for pellets, one for powder. This is where the future of the plastics, chemicals, rubber and tire industries is shaped.



## **Rödermark, Germany**

Technology center built on an industrial scale specifically for the needs of the food industry.



## **Kassel, Germany**

Technology center specialized in mixing. There, comprehensive tests are carried out with the HENSCHTEL®-products to cover all mixing issues.



## **São Paulo, Brazil**

The focus of tests carried out in our São Paulo technology center is set on the plastics and cement industries.





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