

Dedusting technology

Stanelle - solutions for solid bulk handling



Stanelle filter systems – for every bulk application the perfect solution, eco friendly and economical

PNEUFIX-A / PNEUFIX-V

Areas of Application:

The Stanelle PNEUFIX type jet-filter is suitable for dedusting pneumatic and mechanical, continuous and discontinuous charging and conveying processes in **silos and bunkers**. The convincing features of the PNEUFIX are not only its rugged construction, but also its flexible application potential. In conjunction with a direct mounted extractor fan the PNEUFIX can also dedust **conveyor belts, elevators**, and other dust-laden environments. The PNEUFIX is also available in special vacuum and surge proof, heated and insulated, and explosion proof designs.

Functionality:

The PNEUFIX is actuated with a differential pressure-based filter control. This is attached directly to the filter and wired internally for a free choice of intervals. The times for the initiation and suspension of the cleaning-cycles and the introduction of the post-cleaning-cycle can be configured individually at the filter control. The control is programmed for each application and ensures an economical consumption of compressed air. No tools are needed to inspect or replace the cartridges. The filter cartridges are each cleaned with a blow-off valve for the optimal filtration, also during the cleaning-cycle. The PNEUFIX including the valve is ready to operate after connection to the onsite source of electricity (24VDC 110/230VAC) and dry and clean compressed air at 2,5 bar.



Silo and bunker dedusting

Advantages:

- trouble-free continuous operation
- high serviceability, through tool-free maintenance and cartridge replacement
- fully automated differential pressure-based filter control (electric)
- flexible applications
- flanged filter housing
- rugged construction

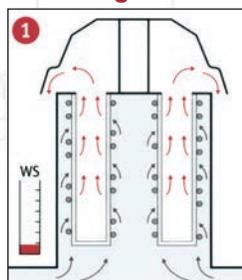


Silo dedusting with PNEUFIX and FLOW-BOW®

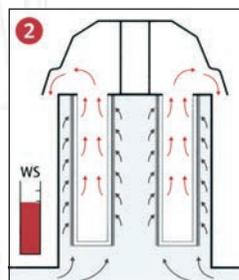
Technical data and dimensions PNEUFIX-A / PNEUFIX-V:

Type	PNEUFIX 20	PNEUFIX 24	PNEUFIX 30	PNEUFIX 36	PNEUFIX 42	PNEUFIX 48
Capacity (Nm ³ /h)	1000	1200	1500	1800	2100	2400
Filter cartridges / pcs.	4	4	6	6	7	7
Solenoid valves / pcs.	4	4	6	6	7	7
Operating pressure	2,5 bar					
Actuation air	75 Nltr/min with a break time of 20 sec.					
Weight without/with fan (kg)	100/140	110/150	200/250	205/255	210/260	215/289
Height without/with fan (mm)	1520/1750	1520/1750	1640/laterally	1640/laterally	1640/laterally	1640/laterally
Width without/with fan (mm)	970/1380	970/1380	1200/1780	1200/1780	1200/1780	1200/1749

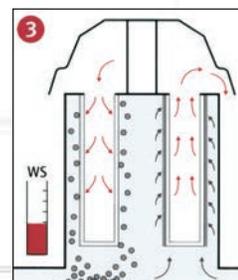
Flow diagrams



Dust laden air arrives at the filter cartridge.
The dust particles deposit on the large outside surface of the filter inserts.
The cleaned medium escapes through the open tops of the cartridges.



The thicker the dust deposits, the greater the filter resistance.
When the set differential pressure is reached the cleaning cycle starts automatically.



Cleaning individual filter elements assures trouble-free continuous operation.
The dust falls back into the silo.
Once the filter resistance falls below a minimum value the cleaning cycle automatically stops.

STAFI

Areas of application:

Stanelle dedusting filters are suitable for filtering exhaust air during the pneumatic charging of **silos** with powdery, dry bulk goods, specifically for the building, stone, and clay industries.

Functionality:

The rugged high quality design of the STAFI has proved itself even under extreme operating conditions. The handling is simple and does not require special knowhow. With the ingenious CLIP-IN system replacing filter hoses is fast and easy. The filter hose unit is pressurised from the inside. The gas flows into the filter hoses that are open at the bottom and closed at the top. At the same time the dust particles are separated from the carrier gas. The clean gas flows to the outside between the filter jacket and weather-hood. The hose fabrics are selected specifically for the various charging media and applications.

The weather-hood and three parted filter housing are made of either hot dip galvanised sheet steel or stainless steel. The base and vibrator plates are plastic coated. Options include stainless steel base plate and antistatic filter hoses.



STAFI

hinged weather-hood

three door housing

3 year warranty!

Silo dedusting

Advantages:

- reliable semi-automatic hose filter system
- low maintenance concept without moving parts susceptible to faults
- weather-hood on a gas spring and three parted housing for easy inspection and maintenance
- CLIP-IN system for fast and simple replacement of filter hoses
- individually replaceable filter hoses
- robust imbalance vibrator
- extremely low residual dust content according to TA-Luft (German Clean Air Act)
- three year warranty

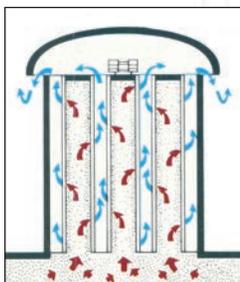


Silo dedusting with STAFI

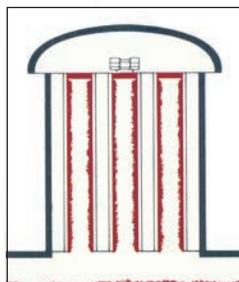
Technical data and dimensions STAFI 1017 / STAFI 1020:

Type	STAFI 1017	STAFI 1020
Capacity (Nm ³ /h)	800	1000
Filter cartridges / pcs.	24	24
Weight (kg)	160	166
Filter frame Ø (mm)	1100	1100
Height (mm)	1700	1900
Flange Ø (mm)	1200	1200
Engine power (kW)	0,16	0,16

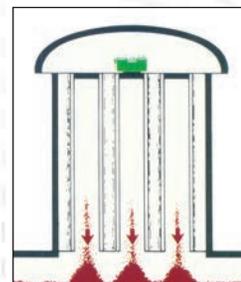
Flow diagrams



Untreated gas flows into the filter hoses that are open at the bottom and closed at the top. Clean gas escapes between filter housing and weather-hood.



After the filling process the hose filter unit is coated with dust on the inside.



The imbalanced vibrator is activated either manually or automatically and the hose surfaces are cleaned. The material flows back into the silo.

STAFI R / STAFI RV

container dedusting

Areas of application:

The Stanelle filter type STAFI R is used for discontinuous filling and conveying processes with powdery dry bulk materials. It is used for the dedusting of containers with mechanical feeding and for the dedusting of discontinuously operated mechanical conveying processes, e.g. screws, troughed chain conveyors and elevators.

Advantages:

- Easy to install filter housing
- Mechanically cleaned cartridge filter with imbalance vibrators
- Filter cartridges with high quality, star-shaped more folded
- polyester fleece covering
- Low residual dust content
- Easy to maintain due to tool-less removable door
- Filter housing made of sheet steel S235JR, painted or stainless steel
- Versions for ATEX zone 20/22 are available for decree



Technical data and dimensions STAFI R / STAFI RV:

Type	STAFI R6	STAFI R8	STAFI R10
Capacity (Nm ³ /h)	300	400	500
Filter cartridges / pcs.	1		
Weight without fan (kg)	55	75	85
Weight with fan (kg)	65	85	95
Width (mm)	700	585	700
Height with fan / without fan (mm)	1260 / 740	1735 / 1240	1735 / 1240
Depth (mm)	700	585	700

ZEWAFI Scales filter

scale dedusting

Areas of application:

The Stanelle filter type ZEWAFI is an electrically controlled fully automatic filter with external pressure vessel and is used for dedusting scales. The Zewafi can be used in combination with the Stanelle mixer Filters MIXFI a consistent solution for mixing plants with aggregate scales.

Advantages:

- Economical dedusting of scales especially cement scales
- Extremely compact design
- Large door openings for easy cleaning and maintenance
- Variable designs
- Filter dusts are returned to the bulk material supplied - no hazardous waste is generated
- High separation efficiency (residual dust content < 5 mg/m³)
- The control system must be provided by the customer or be integrated into the mixer / scales control to be integrated with
- optional a Stanelle clock control is possible



Technical data and dimensions ZEWAFI rectangular:

Type	ZEWAFI 3	ZEWAFI 4	ZEWAFI 5	ZEWAFI 6
Capacity (Nm ³ /h)	150	250	250	300
Filter cartridges / pcs.	1	2	1	2
Solenoid valves / pcs.	1	1	1	1
Operating pressure	2,5 bar			
Actuation air	75 Nltr/min with a break time of 20 sec.			
Weight (kg)	60	65	70	80
Width (mm)	400	548	400	548
Height (mm)	1020	850	1420	1250
Depth (mm)	400	250	400	250

MIXFI mixer filter

Areas of application:

The Stanelle MIXFI type mixer-filter is designed for the direct dedusting of **batch mixers**.

The design concentrated particularly on the problem-free return of the filter-dust back to the mixer. With its selected high quality materials and optimal surface lining the filter can be used on virtually all sectors.

Functionality:

The MIXFI is sited directly over an exhaust air shaft or by means of an adapter directly over the mixer. When fitted with a dust collecting box and side air intake the MIXFI can be positioned directly next to the mixer when it is connected with a flexible suction hose. The MIXFI series features a special cleaning system. The cleaning effects on the filter cartridges are boosted by low pressure valves that also allow entrained air into the mixer when it is emptying. The variable solenoid valve voltage means that the MIXFI can be integrated in every mixer control. The options include a special timer relay for cleaning filter cartridges.



Dedusting batch mixers

Advantages:

- problem-free return of filter-dusts back into the mixer
- simple maintenance and operations monitoring
- retrofitable in existing plants
- individual adaptation to mixer types and installation environment
- compact design

Technical data and dimensions MIXFI

Type	MIXFI 10	MIXFI 15	MIXFI 18	MIXFI 21
Capacity (Nm ³ /h)	500	750	900	1050
Filter cartridges / pcs.	3			
Solenoid valves / pcs.	1			
Operating pressure	4 bar			
Actuation air	105 Nltr/min with a break time of 20 sec.			
Weight (kg)	80	110	120	150
Width with fan (mm)	600 / 470	800 / 524	800 / 519	800 / 519
Height (mm)	1440	1390	1590	1790
Depth (mm)	300	400	400	400

BELFI loader filter

Areas of application:

The Stanelle BELFI type loader-filter is designed for direct dedusting and dust return when silo vehicles and containers are being filled with a Stanelle loading spout. Owing to its compact design it can be used for dedusting **pneumatic conveyor systems, encapsulated conveyor belts, silo systems, and bunkers**. With high quality linings or in the stainless steel design the loader-filter can be used on virtually all sectors. The design concentrated particularly on the problem-free return of filter-dust back into the silo vehicle.

Functionality:

The dust is separated in filter elements that are alternately cleaned with brief surges of compressed air. These cleaning surges are generated with special valves on a pressure accumulator. Arranged in the clean gas chamber this pressure accumulator is fitted upstream with a pressure reducer and fine filter that serve to regulate the cleaning pressure from 3 to 4 bar. Dust is extracted with a fan that can be attached at any point.

The BELFI is fitted with a low pressure valve arranged in the clean gas chamber. This ensures that no pressure greater than 5 mbar is generated in the system and avoids damage to the bellows at the same time. The optional filter control features easy to configure filter cartridge cleaning. This is the first of its kind to allow short interval cleaning-cycles on the filter cartridges after the filling process.



BELFI

Loading spout and belt dedusting

Advantages:

- compact design
- optional explosion proof design
- economical dedusting of loading spouts
- large doors for cleaning and maintenance
- variable solenoid valve voltage
- filter dusts are returned back to the bulk goods
 - there is no hazardous waste



Loading spout and belt dedusting with BELFI

Technical data and dimensions BELFI

Type	BELFI 10	BELFI 15	BELFI 18	BELFI 21
Capacity (Nm ³ /h)	500	750	900	1050
Filter cartridges / pcs.	3			
Solenoid valves / pcs.	3			
Operating pressure	2,5 bar			
Actuation air	75 Nl/tr/min with a break time of 20 sec.			
Weight (kg)	85	120	135	155
Width with fan (mm)	600	800	800	800
Height (mm)	1440	1640	1840	2040
Depth (mm)	300	400	400	400

ULUFI universal air filter

*Loader-, belt- and
bunker dedusting*

Areas of application:

The Stanelle ULUFI type filters are designed for dedusting **loading spouts for silo vehicles** and, owing to their compact designs, for **dedusting conveyor belts**. The loading spout and conveyor belt filter is intended exclusively for dedusting

pourable, fine grained, and dry bulk goods like e.g. cement, lime, premixed plasters, FGD products, and grain.

Available filter sizes are 10, 15, 18, 26 und 54m².



ULUFI
belt dedusting



ULUFI 54 Silo Bunker top filter (exhaust air spigot) without fan

Advantages:

- extremely compact design
- high surface load
- ideal positionability
- optional explosion proof design



ULUFI 38 Belt and loader dedusting system

Technical data and dimensions ULUFI

Type	ULUFI 10	ULUFI 15	ULUFI 18	ULUFI 26	ULUFI 38	ULUFI 54
Capacity (Nm ³ /h)	500	750	900	1300	1900	2700
Filter cartridges / pcs.	5	7	7	10	2 x 8	2 x 11
Solenoid valves / pcs.	3	4	4	5	2 x 4	2 x 6
Operating pressure	4 bar					
Actuation air	105 Nltr/min with a break time of 20 sec.					
Weight (kg)	130	175	240	300	391	620
Width with fan (mm)	1620	1620	1800	1920	1770	2000
Height without compressed air tank (mm)	635	635	635	635	635	635
Depth (mm)	460	600	600	810	1390	810

A

630

1000

Central extraction unit/ Dust collection containers/systems STADUST

*Mobile
Vacuum cleaner container/
Big-Bag solutions*

Areas of application:

If dust cannot or should not be returned, Stanelle offers dust collection containers specially designed for filters. The system consists e.g. of filter unit, fan, collector with drum, rotary valve and slide valve.

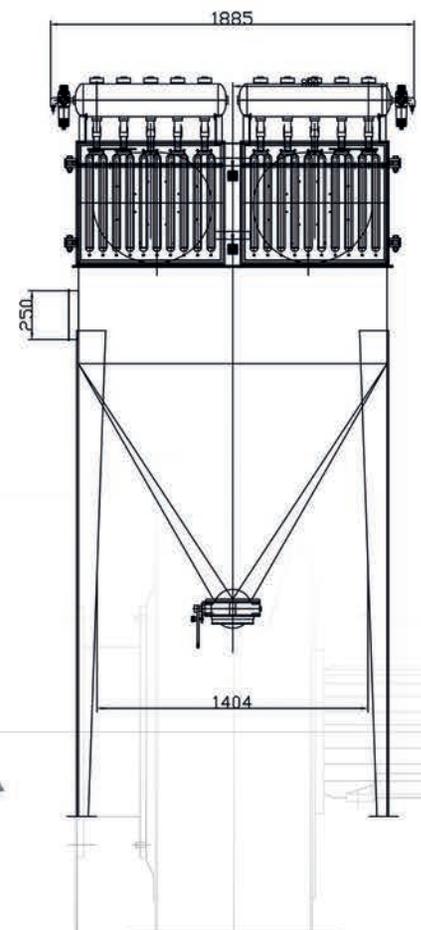
Advantages:

- Modular filter units for every type of dust
- Customization
- optimal coordination with the Stanelle filter types
- effective solutions for problematic materials
- ATEX versions available

PNEUFIX 30
with mobile dust container



ULUFI 38
with dust container
for BIG-BAG



Accessories

There are various designs of filter cartridges, filter inserts, and filter hoses available as options. These are ideal, also for the finest contaminants, for the economical separation of pollutants or the recovery of secondary resources from gases. Some examples are hoses for filtering separators on the smelting, cement, mining, chemicals, food and fodder, and a great many other sectors.



630

1000

Advantages of Stanelle-Filters:

- rugged construction
- compact designs
- high operating reliability
- ecological dedusting
- flexible applications
- economical dedusting
- simple maintenance
- long service life

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