LBR-S SmartFilter with screw conveyor

The filter is designed for small and medium-sized air flows with large material concentration.

Specification

Parameters	Description
Temperature	Max. 75°C
Positive pressure	Max. 800 Pa
Negative pressure	Max. 500 Pa for Standard (overpressure) version Max. 5000 Pa for Vacuum version
Power supply:	230 / 400 V Regeneration fan – 1,1 kW (option 2,2 kW)
Filter element	Superbag 2000 XT15 with ø200 mm collar
Max. quantity of modules	6 modules
Filter area (m^2) per module	HJ: 85 m^2 HE: 42 m^2 LJ: 40 m^2 LE: 20 m^2
Max. filtration area (m^2)	HJ: 510 m^2 HE: 252 m^2 LJ: 240 m^2 LE: 120 m^2
Door switch	At the inspection doors in the filter hopper. At one filter module door per each 5 modules. At each inlet module door.

The LBR-S SmartFilters with screw conveyor is designed for small and medium-sized air flows with large material content, for example filtration of waste-laden extracted air particularly in the wood and paper industries.

The medium/large particles are separated in the filter hopper (inlet section optional) and the air is afterwards distributed to the filter bags. The collected material is discharged through the rotary valve or screw conveyor.

The filter is typically used in situations requiring non-pressurized material discharge directly into a silo, container or separate material transport system.

The filter can be supplied for either continuous operation or with a pause for cleaning of the filter bags every four hours.

The LBR-S Smartfilter is suitable for explosive dusts type St1 and St2.

Description

The LBR-S Smartfilter is a modular filter made of galvanised steel sheets.

(Size of base module: 1200 x 1200 mm).

The filter is self-supporting; it has telescopic supporting legs and is suitable for outdoor locations.

Each module of the module filter construction is fitted with a combined inspection and explosion relief door. Side venting is standard. (Option – top venting or venting type UP).

The filter is available in two widths, type E – one module wide (1200 mm) and type J – two modules wide (2400 mm).

Inlet of air in hopper or via inlet module.

A regeneration fan can be mounted for reverse air cleaning of the filter bags according to a pre-set sequence. Positioning of the regeneration fans - optional on the roof or on the side.

Superbag 2000 XT15 antistatic polyester filter bags are standard (25 per module).

Product Marking of LBR-S SmartFilter:

The marking is based on product certificate Baseefa 06 ATEX 0068X:

- The explosion relief doors are marked:

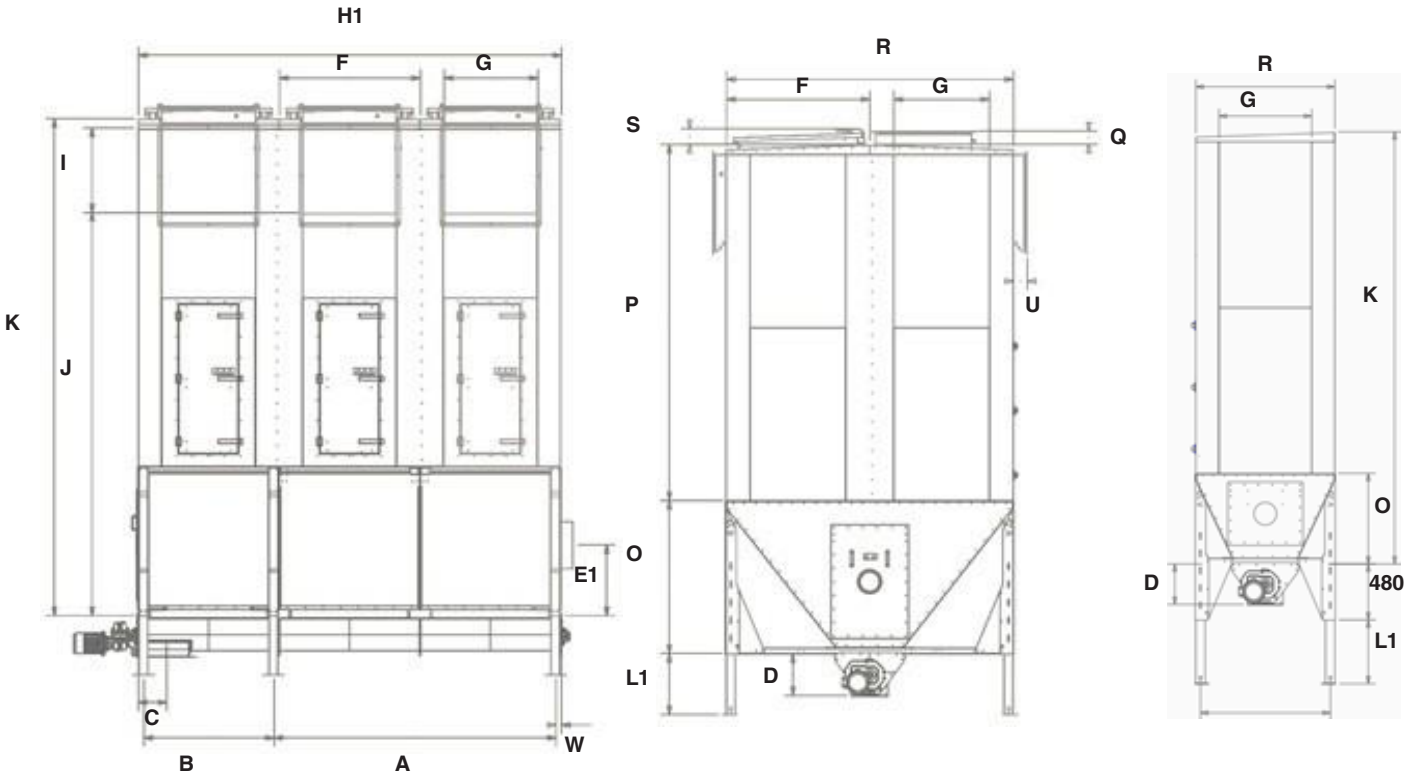
CE 1026 Ex II D

For dust type St1 for installation in non-zone is marked:

CE 1026 Ex II D St1

For dust type St1 and St2, the filter body is marked:

CE 1026 Ex II D St2



Type	A #	B	C	D	E1	F	G	H1	I	J**	K**	M	O	P**	Q	R	S	U	W
E	2400	1106	242	350	482	1200	800	3600	720	2937	3740	1120	780	2960	135	1200	115	150	47
J	2400	1106	242	350	482	1200	800	3600	720	3420	4220	2320	1260	2960	135	2400	115	150	47

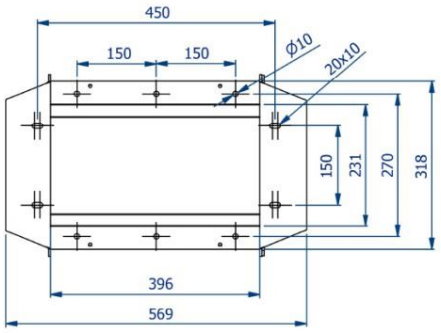
* Optional position of outlet / reg. fan. 800 x 800 or 600 x 600 mm. (LJ version: not on door side)
** Height of LJ version – reduce 1440 mm
*** 400 mm to bottom place in hopper
# Optional 1200 mm.

Filter length			
Type	H1	Type	H1
1 HJ & LJ	1200	1 HE & LE	1200
2 HJ & LJ	2400	2 HE & LE	2400
3 HJ & LJ	3600	3 HE & LE	3600
4 HJ & LJ	4800	4 HE & LE	4800
5 HJ & LJ	6000		
6 HJ & LJ	7200		

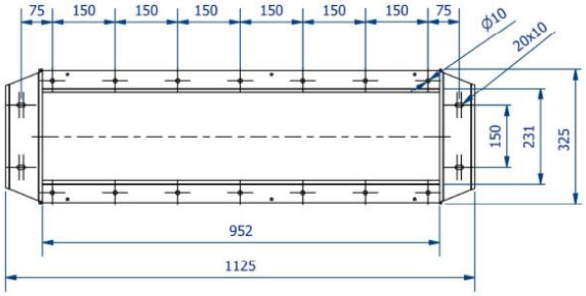
L1 - telescopic filter legs		
Type	Min. Adjust	Max. Adjust
L= 1196	155	850
L= 1596	555	1250
L= 2195	1155	1850
L=2596	1555	2250

All dimensions in mm.

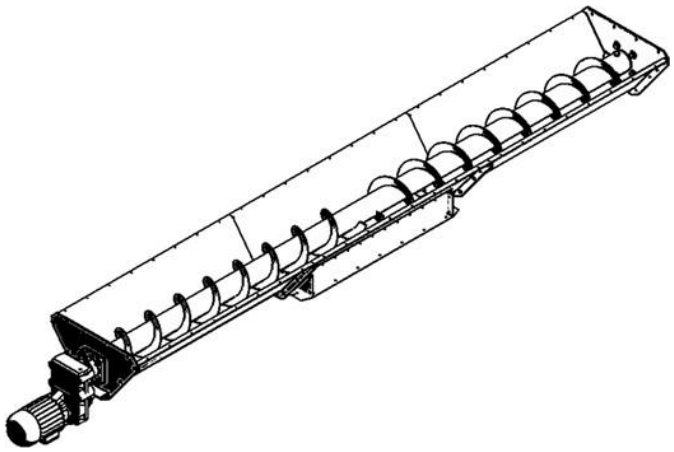
Flange NRSZ4



Flange NRSZ10



Screw conveyor



Example: screw conveyor 3600mm with outlet on the middle

Advantages

- Reliable
- Minimal maintenance need
- Useable in ATEX zone 22 and 21 (only as integrated part of the filter)

Options

Lengths of 2400mm, 3600mm, 4800mm, 6000mm, 7200 mm are possible.

Outlet for rotary valves: NRS4 or NRS10

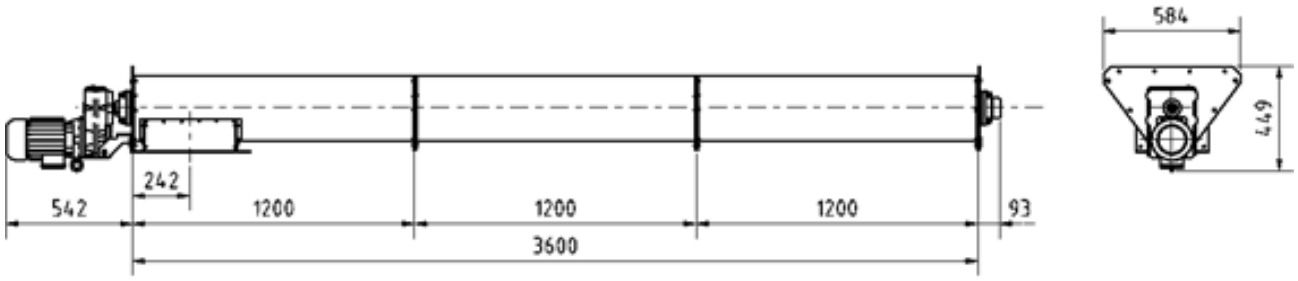
The screw conveyor can be used for transporting dust and chips within various industries including wood. The screw conveyor can be used as a separate conveyor or fitted directly under a filter.

Description

The screw conveyor type PSK is made in galvanized steel plate. The hopper and the top panel are made in 2 mm steel. The hopper is made in modules, each 1200 mm and can be supplied in 2 - 6 modules (2400 – 7200 mm).
As standard the hopper can be supplied with outlet in the driving end, opposite the driving end and in the middle. The outlet can be supplied to fit the rotary valves type NRS4 and NRS10. The outlet is also available with a transition from rotary valve NRS4 to NRS3.
The screw has a 108 mm center pipe and the windings are 46 mm high and made in 4 mm steel. he gradient of the screw conveyor is 200 mm. The capacity at 30 rpm and 50 Hz is approx. 10 m^3/h. Standard motor size 1.1 kW.

The screw conveyor is also available in ATEX version for mounting in zone 22 or zone 21. The inner section of the screw conveyor is defined as zone 20. Depending on the version additional explosion membranes on the screw conveyor top are necessary.

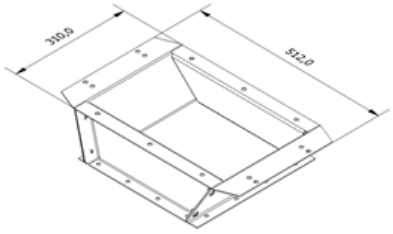
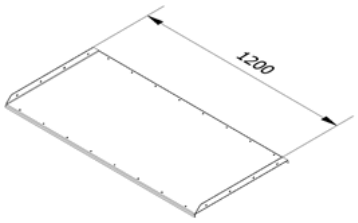
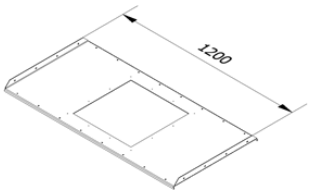
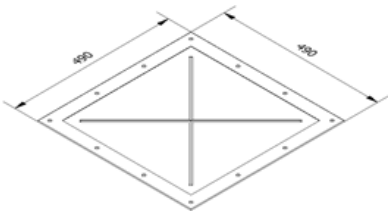
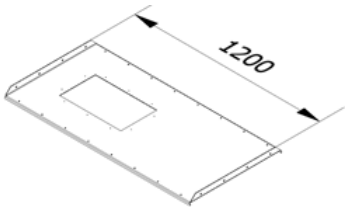
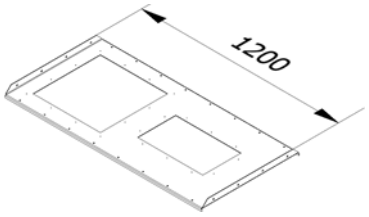
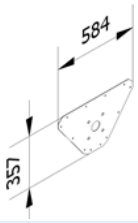
Dimension



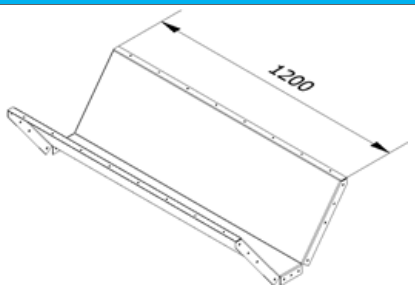
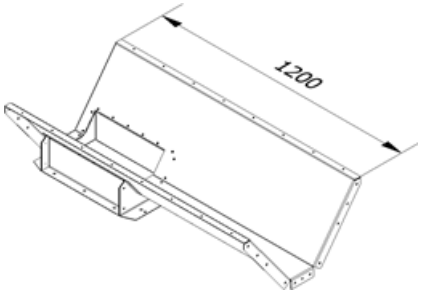
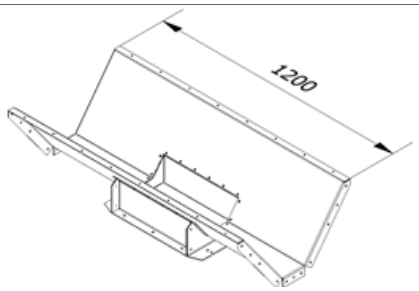
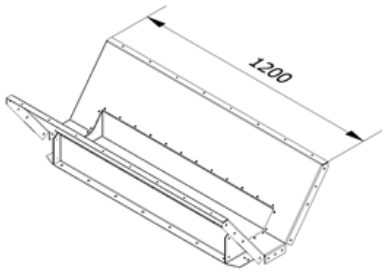
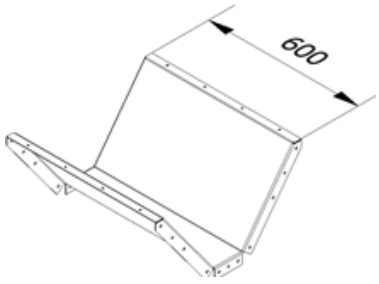
Example of module length 3600.

All dimensions in mm.

Accessories for screw conveyor

Description	Figure	Item number
Transition to NRS3 rotary valve		5503412
Closed top panel		5503406
Top panel with hole for Ex membrane		5503408
Flange for assembling of top panels		5503407 (1 pc. Per top panel + 1 pc.)
Ex membrane		5502155
Top panel with hole for NRS4 inlet		5503417
Top panel with hole for Ex. membrane and NRS4 inlet		5503416
End panel		5503395

Hoppers

Figure	Item number
	5503397
	5503420
	5503421
	5503422
	5503415

Ordering

By ordering LBR-S, please specify:

- Dust characteristics K_{ST} and p_{max}
- Zone-rating of place for installation (Non-zone)
- Filter material type (only antistatic)
- Answers to the question session in the configurator.