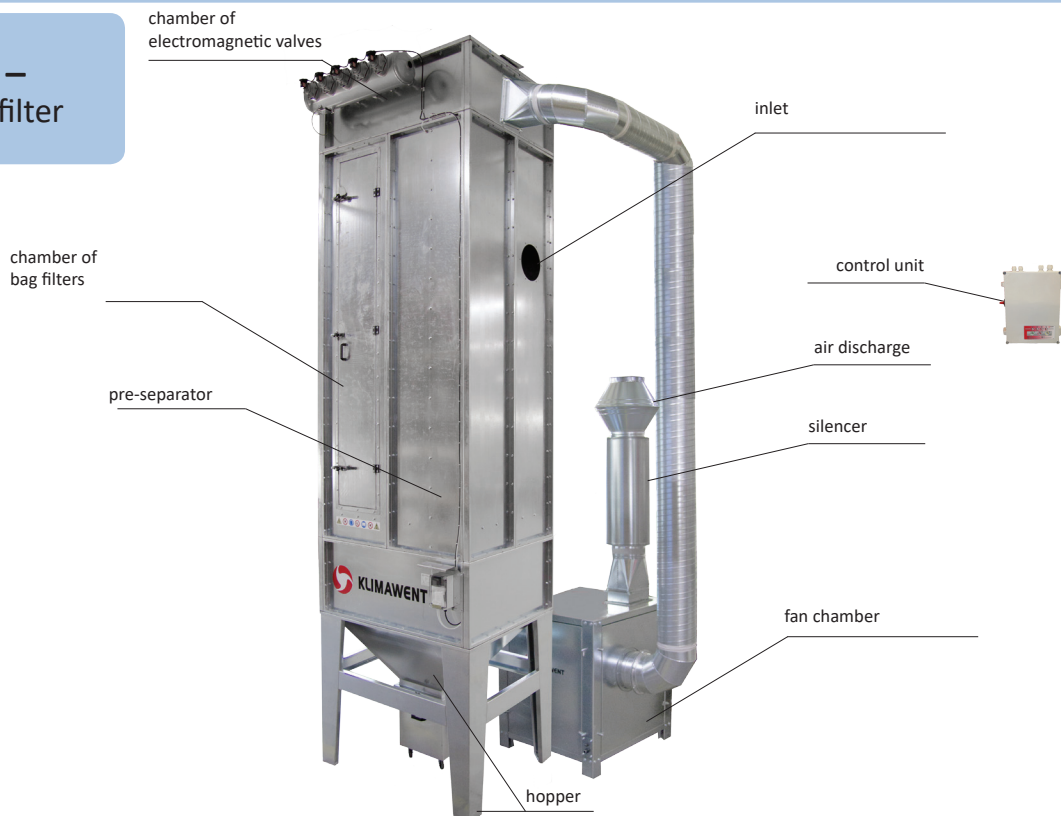




BIG-BAG-4000/Ex – filtering unit with bag-filter



Purpose

BIG-BAG-4000/Ex filtering system with bag filters is applied in many branches of industry, for cleaning the air of powdery materials and dust – of explosion class ST1.

The filtering system is designed for application in areas of explosion risk, according to the ATEX 94/9/EC Directive.

Maximum temperature of the conveyed air is +40°C. Filtration efficiency of the filters 95%.

Structure

BIG-BAG-4000/Ex filtering system consists of a filtration unit, fan chamber and a control unit.

A. Filtration unit

Consists of subsequent elements:

- base – includes a hopper chamber and a waste container,
 - pre-separator,
 - filtration chamber – with bag filters,
 - chamber of electromagnetic valves – striking off the dust which accumulated on the filters,
- decompression panels – to relieve the explosion, by discharging the blast effects (mainly pressure) outside the device (through the venting).

On the four-legs base (with hopper chamber and waste container), are placed two chambers: pre-separator chamber and a chamber with bag filters.

The polluted air is drawn in, through the inlet, into the pre-separator, to get captured the largest dust fractions. Subsequently, the air is directed to the bag filters for precise filtration.

Above the filtration chambers, there is an electro-valves chamber. The electromagnetic valves are cleaning the filters from the deposited dust, by means of compressed air impulses. The cleaning proceeds automatically. The appliance can work in

a continuous mode. The separated dust is falling into a waste container on wheels.

On the side wall, there is a decompression panel relieving the explosion, by discharging the blast effects (mainly pressure) outside the device through a vent. In case of explosion, the internal device pressure is reduced to the safe level. Due to explosion risk, it is recommended to install the whole device outside the building, (as the decompression panel, can cause impact risk to people in the vicinity, while discharging).

B. Fan chamber

As a sound-isolated construction, the chamber contains a radial fan. The fan is manufactured according to the ATEX 94/9/EC Directive. The fan chamber must be placed near the filtering unit and connected with it through SPIRO spiral-seam ducts.

C. Control unit

The automation set provides continuous work of the fan and automatic filter cleaning by compressed air impulses. As the control unit is not of Ex execution, it must be installed beyond the explosion risk area.

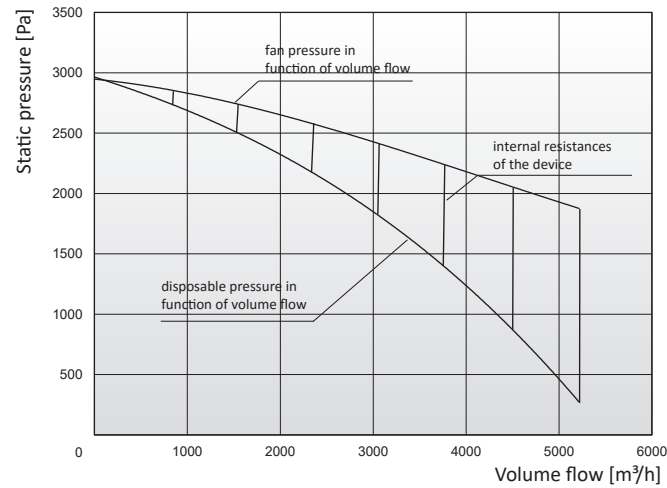
Additional accessories:

On demand of Customer we deliver:

- non-return valves – in ATEX Directive compatible execution, to be installed on the extraction ductwork (in case of explosion, the valves protect from expanding the explosion blast further within the extraction installation),
- rotary-cell valve – to carry the dust onto a belt conveyor.



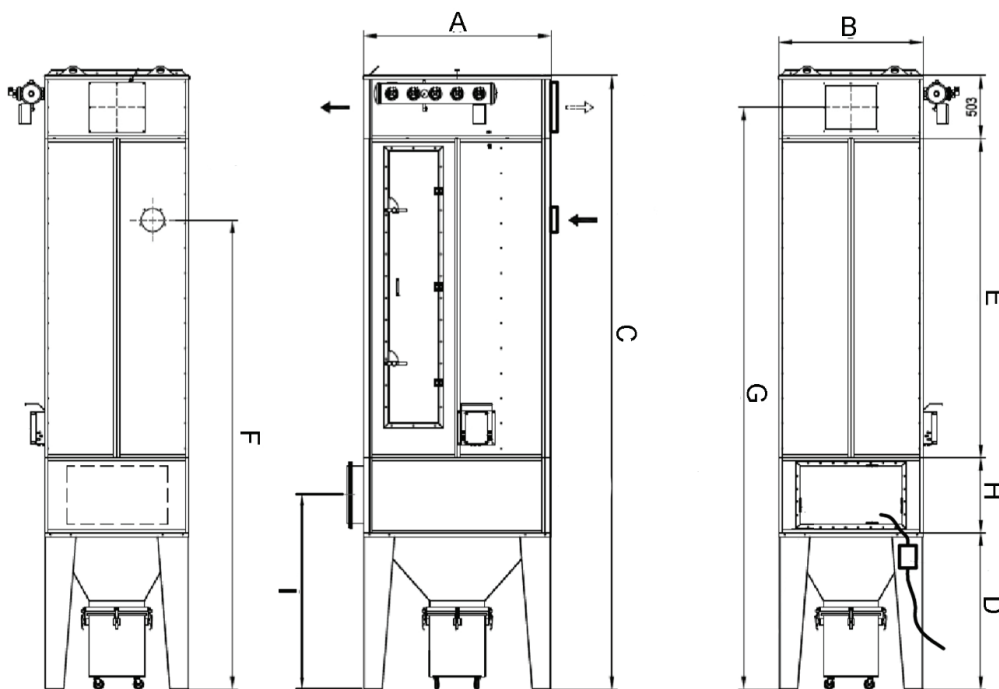
Filtration system BIG-BAG-4000/Ex with chamber WPA BOX-11/Ex



Technical data of the filtration unit

Type	BIG-BAG-4000/Ex
Marking	II 3 D EX TD A22 IP 65 T 200°C
Part no.	815F01
Maximum volume flow [m³/h]	5200
Weight [kg]	1195
Diameter of inlet [mm]	315
Size of outlet [mm]	200x350
Required compressed air pressure [MPa]	0,6
Quantity of bag filters	25
Capacity of waste container [dm³]	99
Consumption compressed air [Nm³/h]	12

Dimensions



Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]
BIG-BAG-4000/Ex	1500	1150	5406	1250	3053	4000	5155	600	1470	1550

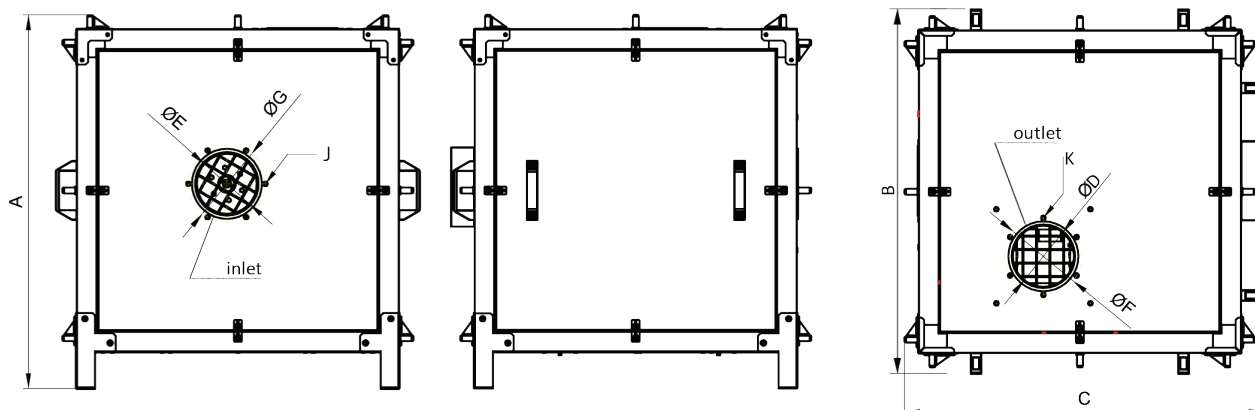


BIG-BAG-4000/Ex

Technical data of the fan chamber

Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of*:		Maximum volume flow [m ³ /h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-BOX-11/Ex	888W36	II 3 G/D c Exe II T4	3000	3x400	5,5	54	75	61	8050	2950	300

* Acoustic pressure level was measured with the silencer type T-WPA-BOX applied at the inlet and outlet of the fan chamber.




Dimensions

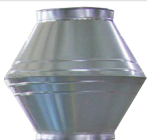
Type	A [mm]	B [mm]	C [mm]	Diameters of connections		Pitch diameter of the connection openings		K [mm]	J [mm]
				ØD [mm]	ØE [mm]	ØF [mm]	ØG [mm]		
WPA-BOX-11/Ex	1329	1336	1336	250	250	274	274	M8	M8

Additional accessories (for the fan chamber)

Silencer T-WPA-BOX


	Type	Part no.	Inlet [mm]	Outlet [mm]	Remarks
	T-315 WPA-BOX	830T28	250	315	The set consists of: reducer, silencer, silencer bracket. Install the set on the inlet ferrule or/and on the outlet of the WPA-BOX fan chamber.

Air discharge

	Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
	E-315	842W39	315/315/700	14

Replaceable parts (for the filtration unit)

Bag filter

	Type	Part no.	Weight [kg]	Class	Filtration efficiency [%]
	FW-BAG 4000/Ex	838F78	8,55	H 11	95

Decompression panel

	Type	Part no.	Dimensions of the panel [mm]
	DP1/Ex	800P02	450x500