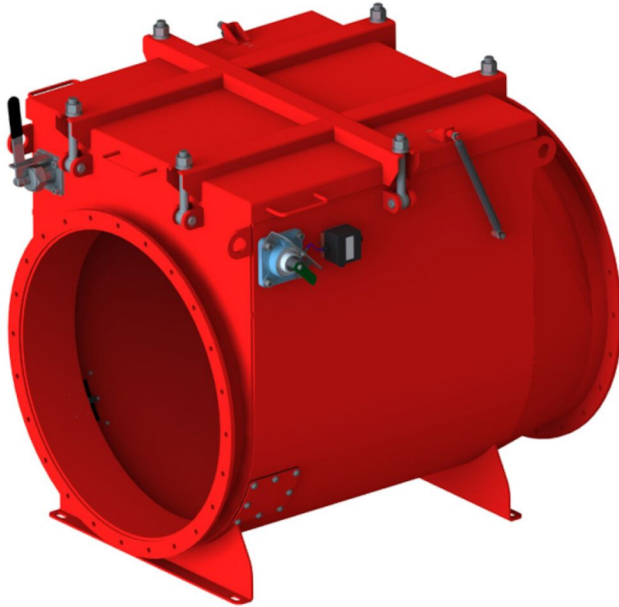


B-Flap I-Explosion Isolation Flap Valve

Explosion Isolation Flap Valve B-Flap I - protective system.



Flow-Actuated Flap Valve type B-Flap I is designed as explosion pressure resistance equipment, which is able to prevent a transmission of dangerous effects of explosion pressure wave and flames front to upstream areas. Product has been designed in accordance with European Directive 2014/34/EU and certified by EN 16447 and EN 15089.

B-Flap I can be used in PULL acc. EN 16447 and PULL /PUSH or Reverse flow applications acc. EN 15089.

Description:

Welded construction in RAL 3000 painted carbon steel. Stainless steel without a surface finish only on special request.

Function:

In case of an explosion in the downstream equipment (e.g. dust collector) a pressure wave will force to close the Flap plate and lock in position. When Flap plate is closed it makes an effective barrier against approaching flame front. This prevent the explosion from being transmitted to upstream work areas.

- Inside valve, zones 20 or 2
- Outside valve, zone 21,22, no zone

Product name	B-Flap I-Explosion Isolation Flap Valve
Material	Painted carbon steel
Operating temperature range	-40°C to 80°C
Ambient temperature range	-40°C to 80°C (-20°C to 60°C for versions with electrical accessories)
Dust Concentration in duct	500 g/m ³
Max velocity in duct (m/s)	35
Minimum velocity in duct	0
Install type	Pull



B-Flap I-Explosion Isolation Flap Valve

Diameter (mm)	Weight (kg)	Min vessel size (m³)	Explosion Class ATEX	Minimum vessel size, pull (m³)	Kst (bar m/s)	Maximum reduced pressure, Pred (bar)	Model
100	9	0,46	St1	0,46	200	0,6	73007996*
125	11	0,46	St1	0,46	200	0,6	73007998*
150	13	0,46	St1	0,46	200	0,6	73008000*
200	18	0,46	St1	0,46	200	0,6	73008002*
250	40	0,9	St1	0,9	200	0,45	73008004*
300	50	0,9	St1	0,9	200	0,45	73008006*
315	53	0,9	St1	0,9	200	0,45	73008008*
355	61	0,9	St1	0,9	200	0,45	73008010*
400	77	0,9	St1	0,9	200	0,45	73008012*
100	9	0,46	St1	0,46	200	0,6	73008021**
100	9	0,46	St2	0,46	300	0,6	73008022**
125	11	0,46	St1	0,46	200	0,6	73008023**
125	11	0,46	St2	0,46	300	0,6	73008024**
150	13	0,46	St1	0,46	200	0,6	73008025**
150	13	0,46	St2	0,46	300	0,6	73008026**
200	18	0,46	St1	0,46	200	0,6	73008027**
200	18	0,46	St2	0,46	300	0,6	73008028**
250	40	0,9	St1	0,9	200	0,45	73008029**
250	40	0,9	St2	0,9	300	0,35	73008030**
300	50	0,9	St1	0,9	200	0,45	73008031**
300	50	0,9	St2	0,9	300	0,35	73008032**
315	53	0,9	St1	0,9	200	0,45	73008033**
315	53	0,9	St2	0,9	300	0,35	73008034**
355	61	0,9	St1	0,9	200	0,45	73008035**
355	61	0,9	St2	0,9	300	0,35	73008036**
400	77	0,9	St1	0,9	200	0,45	73008037**
400	77	0,9	St2	0,9	300	0,35	73008038**
450	88	1,6	St1	1,6	200	0,35	73008039**
500	101	1,6	St1	1,6	200	0,35	73008040**
560	157	6	St1	6	200	0,45	73008041**
630	180	6	St1	6	200	0,45	73008042**

*B-FLAP I, sizes 100-400, St1 marked, may be used on light metal dust (aluminum, etc.)

**Stainless Steel

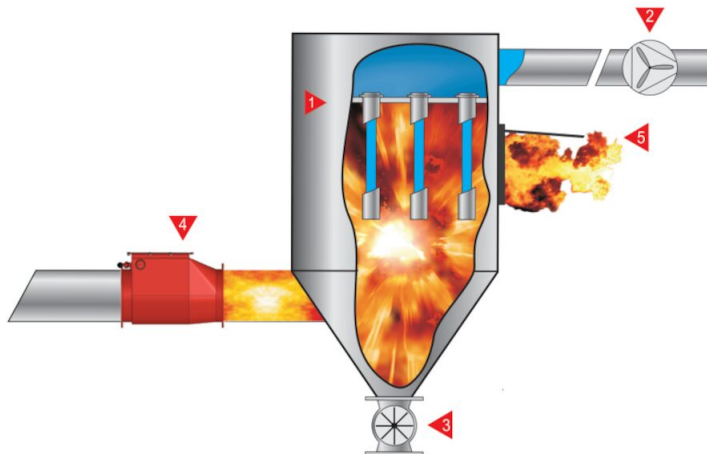
B-Flap I-Explosion Isolation Flap Valve

	Accessory	Part No
	Position sensor ATEX version (zone 21, 22, no zone)	73002043
	Position sensor standard version (no zone)	73002168
	Position and Dirt sensors ATEX version (zone 21, 22, no zone)	73008049*

**Detecting part -
Inside for Zone 20 and Cable end for Zone 21, 22 or non-zone*

B-Flap I-Explosion Isolation Flap Valve

Working B-Flap during explosion:



- 1) Filter
- 2) Fan
- 3) Rotary feeder
- 4) B-Flap valve
- 5) Explosion burst membran

Dust combustion properties:

Dust combustion propertis	
Dust DN 100 to DN 400	up to $K_{st} = 300 \text{ bar} \cdot \text{m} \cdot \text{s}^{-1}$ - non-metal dust
	up to $K_{st} = 350 \text{ bar} \cdot \text{m} \cdot \text{s}^{-1}$ - metal dust

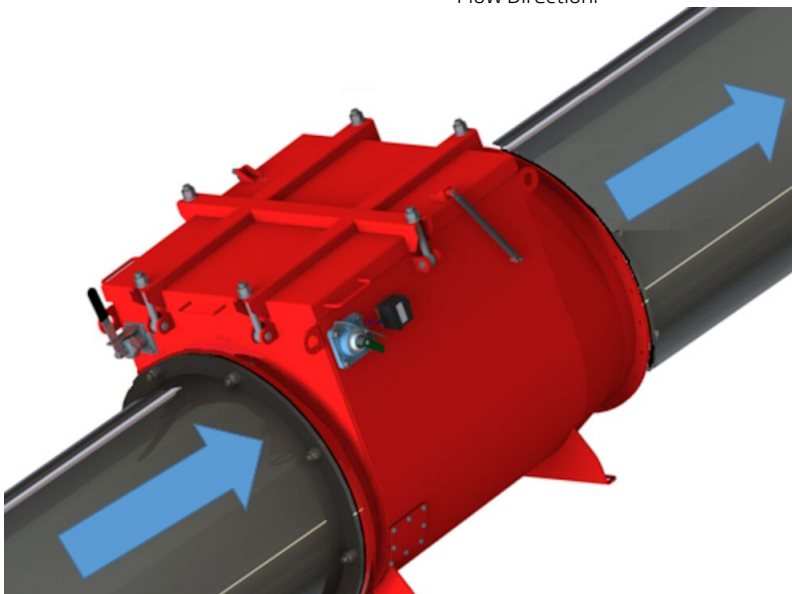
B-Flap I-Explosion Isolation Flap Valve

Installation distance, pressure and vessel volume:

B-FLAP I		DN 100		DN 125 to DN 200			DN 250 to DN 400		
Dust explosive class		St1	St3	St1	St3	St3	St1	St3	St3
Max. p_{red} in the container $p_{red,max}$ [bar]		0,6	0,85	0,6	0,6	0,6	0,45	0,35	0,7
Pressure resistance p_{max} [bar]		3,2		5			1,8		
Minimum installation distance L_{min} [m]	Pipes without elbows	3	2,5	3	3	3,2*	4	4	5,2
	Pipes with elbows	4		4	4		5	5	
Maximum installation distance L_{max} [m]		15		15			15		
Minimum protected vessel volume (m3) (Applies to installations according to EN 16447)		0,46	0,4	0,46	0,46	1,35	0,9	0,9	1,35
Max. air velocity in the pipe (in the explosion direction) [m/s]		35		35	30		20	12	
Max. air velocity in the pipe (against the explosion direction) [m/s]		35							

*3,2 m for metal dust

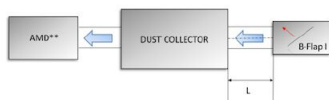
Flow Direction:



B-Flap I-Explosion Isolation Flap Valve

Special installation requirements,
PULL and PUSH Configurations - distance rules

PULL configuration



PUSH configuration

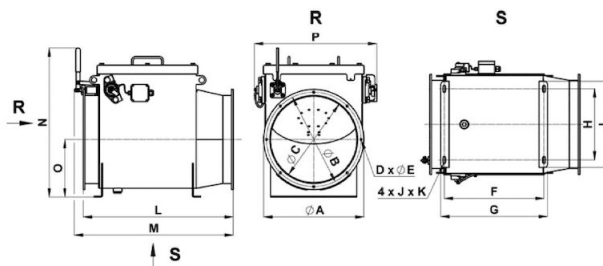


** AMD=Air moving device or fan

A) Dust Collector

B) AMD (Air Moving Device or fan)

B-Flap I dimensions:



Part number	S11	S13	Type	φA [mm]	φB [mm]	φC [mm]	D	Dimensions													Weight [kg]
								E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	N [mm]	O [mm]	P [mm]		
73007996	73008765	DN 100	152	132	100	4	188	210	80	125	10	25	280	312,5	303	99	244	9			
73007998	73008766	DN 125	177	157	125	4	213	235	100	145	10	25	305	337,5	327	111,5	269	11			
73008000	73008767	DN 150	202	182	150	4	238	260	125	170	10	25	330	362,5	353	124	294	13			
73008002	73008768	DN 200	253	233	200	6	288	310	170	215	12	32	390	422,5	403	149	344	18			
73008004	73008769	DN 250	303	283	250	6	311	333	200	270	12	32	510	551	541	192	417	41			
73008758	73008770	DN 280	343	317	280	9,5	341	374	230	300	12	32	560	601	576	207	447	48			
73008006	73008771	DN 300	363	337	300	9,5	361	394	245	315	12	32	580	621	591	217	467	51			
73008008	73008772	DN 315	378	352	315	8	376	409	255	325	12	32	600	641	606	224,5	482	54			
73008010	73008773	DN 355	418	392	355	8	416	449	290	360	12	32	630	671	646	244,5	522	62			
73008012	73008774	DN 400	464	438	400	8	462	495	330	400	12	32	695	736	692	267,5	568	73			

1) Part number

2) Type

3) Dimensions [mm]

*) not available