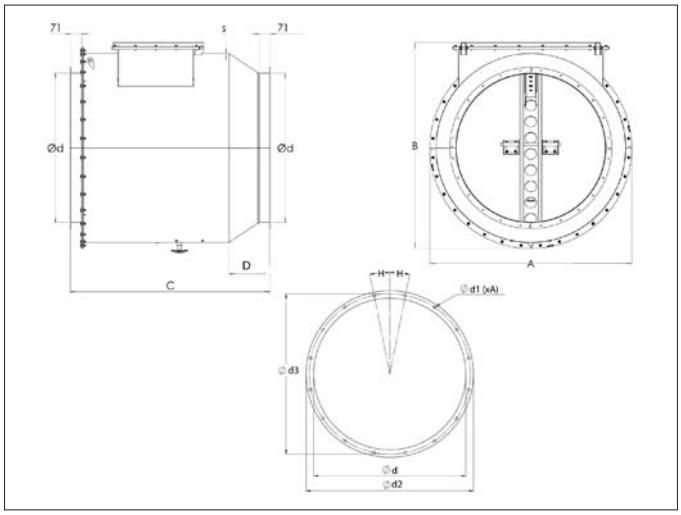
BADA - Certified ATEX non-return valve



BADA - Certified ATEX non-return valve
An explosion involves not only the immediate processed material, but can also propagate to the rest of the process. This propagation can be avoided if the affected processed material is quickly isolated by a non-return valve.

The BADA non-return valve is designed to separate the filter from the plant. It is a simple and effective system that is easy to install, without electronics which requires no electrical connections, pratically no maintenance and with very low pressure loss.

Our BADA non-return valve is an excellent ATEX certified Safety system for the compartmentalization of an explosion and is suitable for use in Ex zone 21 (ext.) and up to Ex zone 20 (int.).

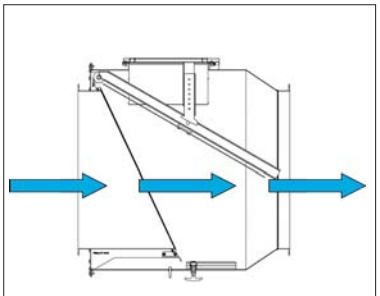
Material
Body : steel 16MO3 (EN 10028)
Closing flap : HB 400 HARDOX (EN10051)
Surface treatment : powder coated RAL 5010

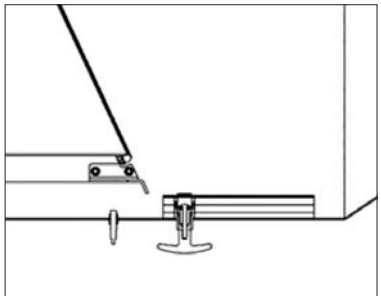
Type
Welded plates with welded FA flanges

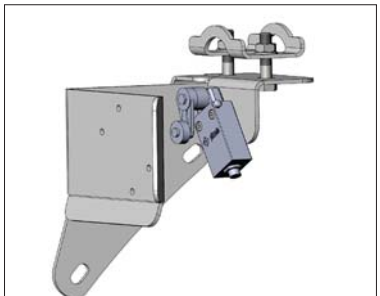
Other information
- series includes diameters Ø 200 up to Ø 1000
- conformity according to : EN 16447 : 2014
  NFPA 69 regulations
- certification number : FTZU 18 ATEX 0141X
  FTZU 16 ATEX Q 002
- ATEX norm 114 : 2014/34/EC
- exterior zone certification : 21-22
- interior zone certification : 20-21-22
- level of protection : St1 (organic & nonmetallic) up to 200 bar m/s
- Kst max. : 200 bar.m.s-1
- Pred,max. : 0,5 bar
- maximum airspeed : 25 m/s
- use : Indoors or outdoors
- min. / Max installation distance from filter Ø 200 : 2 m to 7 m
  Ø 250 to 400 : 3 m to 7 m, and Ø 450 to 1000 : 4 m to 7 m
- max. dust concentration in duct : 400 g;m^{-3}
- only to be used in horizontal ducting
- temperature range : -20°C to +40°C.

Advantages
- economically suitable solution for security against an explosion
- completely mechanical requiring practically no maintenance
- no power consumption
- low pressure losses
- high pressure resistance

Options
- position sensor for BADA (ATEX Zone 22)
- position sensor for BADA (ATEX Zone 21)
- dust level indicator for BADA


Airflow mounting


Release handle


Position indicator option

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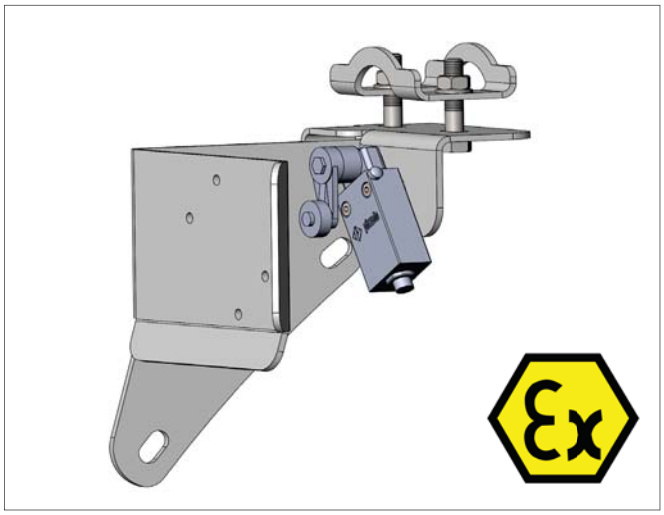
Pressure loss per diameter

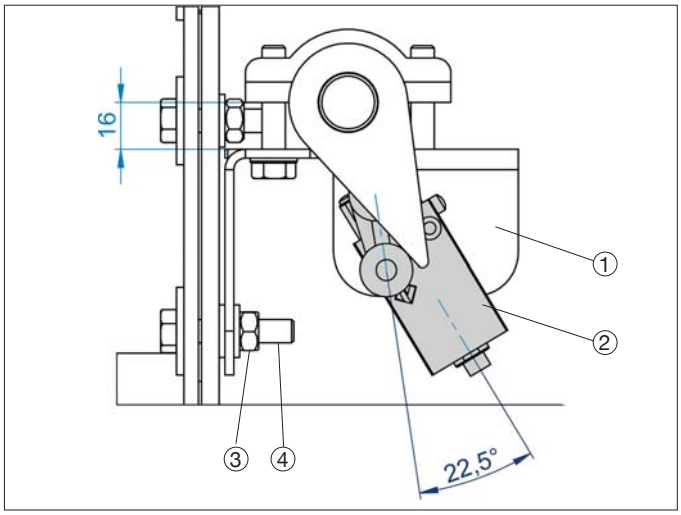
Pa/Ø	Velocity 15 m/s	20 m/s	25 m/s
200	390	340	460
250	380	350	467
300	370	360	473
350	360	370	480
400	350	380	487
450	340	390	493
500	330	400	500
550	320	410	507
600	310	420	513
650	290	340	440
700	280	350	447
750	270	360	453
800	260	370	460
850	250	380	467
900	240	390	473
950	230	400	480
1000	220	410	487

Dimensions

Ø d	Code	A mm	B mm	C mm	D mm	d1 mm	d2 mm	d3 mm	A qty	H (°)	S mm	Weight kg
200	BADA000018	470	510	590	137	10	255	235	12	15	3	45.00
250	BADA000019	520	555	620	137	10	305	285	12	15	3	52.00
300	BADA000020	570	610	640	137	10	355	336	12	15	3	60.00
350	BADA000021	620	660	670	137	12	415	389	12	15	3	70.00
400	BADA000022	670	710	735	157	12	465	439	16	11,25	3	83.00
450	BADA000023	720	760	785	157	12	515	489	16	11,25	3	94.00
500	BADA000024	770	810	835	157	12	565	540	16	11,25	3	106.00
550	BADA000025	820	860	885	157	12	615	590	16	11,25	3	118.00
600	BADA000026	870	910	935	157	12	665	640	16	11,25	3	130.00
650	BADA000010	985	1021	1090	247	12	715	690	24	7,5	3	169.00
700	BADA000011	1035	1072	1120	247	12	785	750	24	7,5	3	185.00
750	BADA000012	1085	1127	1150	247	12	835	800	24	7,5	3	199.00
800	BADA000013	1152	1213	1220	277	12	885	850	24	7,5	3	229.00
850	BADA000014	1202	1263	1340	277	12	935	900	24	7,5	3	241.00
900	BADA000015	1252	1313	1340	277	12	985	950	24	7,5	3	268.00
950	BADA000016	1302	1363	1340	277	12	1035	1000	24	7,5	3	281.00
1000	BADA000017	1352	1413	1340	277	12	1085	1050	24	7,5	3	294.00

NCED - Position sensor





NCED - Position sensor
The BADA position sensor is designed to send a signal to a control panel when the BADA ATEX non-return valve is in a locked position.

It is a prewired device produced according to the ATEX directives. Available for zone 21 (model FD-EX8) or 22 (model FA-EX5).

Advantages
- Economically suitable solution for explosion detection
- Requires practically no maintenance
- Little power consumption

Protection level
- FA-EX5 model for 3D (Zone 22)

II 3D Ex tc IIIC T80°C Dc

- FD-EX8 model for 2D (zone 21)

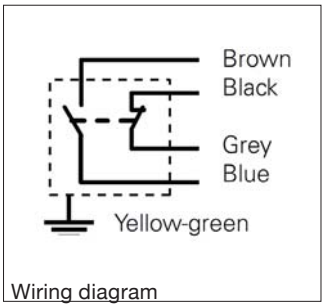
II 2D Ex tb IIIC T80°C Db

Material
powder coated metal housing

Type
FA-EX5 : Prewired with 2m cable IP 67 according to EN 60529
FD-EX8 : Prewired with 2m cable IP 66 according to EN 60529

Other information
- conformity according to : ATEX Directive 2014/34/EU, EMC DIrective 2014/30/EU
- positive contact opening according to : IEC 60947-5-1, EN 60947-5-1
- other Compliance standards : IEC 60947-5-1, EN 60947-5-1, EN 60947-1, IEC 30204-1, EN 60204-1, EN ISO 14119, EN ISO 12100, IEC 60529, EN 60529, UL 508, CSA 22.2 No.14, IEC 60079-0, EN 60079-0, IEC 60079-31, EN 60079-31, IEC 60079-15, EN 60079-15
- current : 10A (FA model), 6A (FD model)
- insulation voltage : 24 to 400 V AC/DC
- protection : fuse type aM 10A 500V or aM 6A 500V
- temperature range : -20°C to +60°C.

Options
- none



Wiring diagram

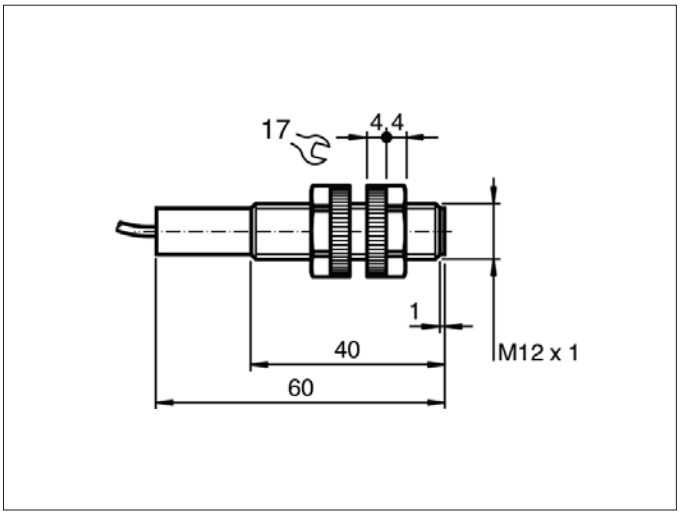
Parts list

Part #	Description	Quantity
1	Position sensor support plate	1
2	Position sensor FA or FD model	1
3	M10 nut	2
4	M10 bolt	2

Voltage FA-EX5	AC15 (50>60 Hz)			DC13		
Ue (V)	120	250	400	25	125	250
Ie (A)	6	4	3	2.5	0.55	0.27

Voltage FD-EX8	AC15 (50>60 Hz)		DC13		
Ue (V)	250		24	125	250
Ie (A)	6		3	0.55	0.3

NCEA000001 - Dust level sensor



NCEA000001 - Dust level sensor
This sensor is designed to measure the dust level formation within the BADA ATEX non-return valve and give a signal in case of non-compliance.

It is a prewired device produced according to the ATEX directives.

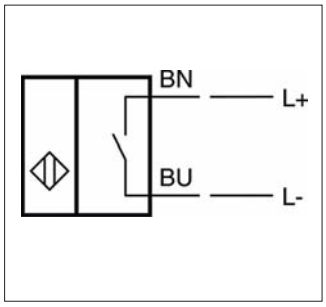
Protection level
- II 1G Ex ia IIC T6...T1 Ga
- II 1D Ex ia IIIC T135°C Da

Material
Stainless steel housing with M12 mounting nuts

Type
Pre-wired with 2 x 10 m PVC coated cables

Other information
- Conformity according to : CE, CSA, UL and FM
- NAMUR compliance : EN 60947-5-6:2000 IEC 60947-5-6:1999 and EN 60947-5-2:2007
- Other Compliance standards : EN 60947-5-2/A1:2012, IEC 60947-5-2:2007, and IEC 60947-5-2 AMD 1:2012
- Voltage : 12 V DC
- Protection : IP 68
- Temperature range : -25°C to +70°C

Options
- Other voltages



Wiring diagram