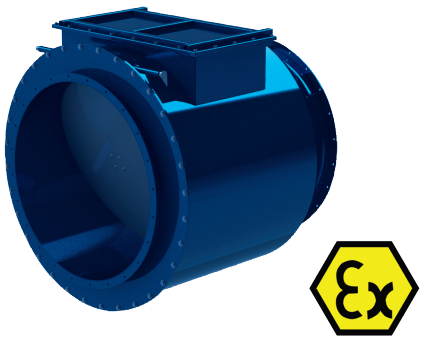
DUST SPARES
dust control spare parts for industry
www.dustspares.co.uk 03456 800 696

Atex Non Return Valve



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 for 200-400
  0.8 for 450-600 and 0.70 for 650-1000
- Pred,max. : 0,5 bar
- Maximum airspeed : 25m/s
- Use : Indoors or outdoors
- Min. / Max installation distance from filter Ø 200 : 2.2m - 7.2m
  Ø 250 to 400 : 3.1m to 7.2m, and Ø 450 to 1000 : 4m to 7.2m
- **Only to be used in horizontal ducting**
- Temperature range : -20°C to +60°C.

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 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, practically no maintenance and with very low pressure loss.

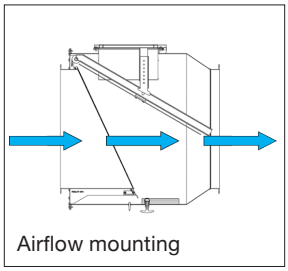
Our non-return valve is an excellent ATEX certified Safety system for the compartmentalization of an explosion and is suit-able for use in Ex zone 21 (ext.) and up to Ex zone 20 (int.)

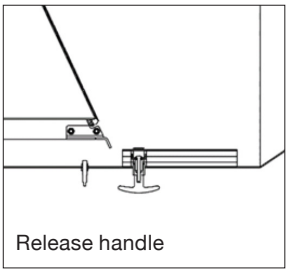
Advantages

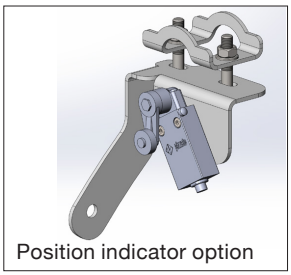
- Economically suitable solution for security against an explosion
- Completely mechanical requiring practically no maintenance
- NO power consumption
- Low pressure losses
- High pressure resistance

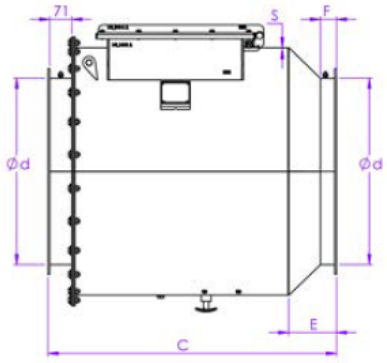
Options

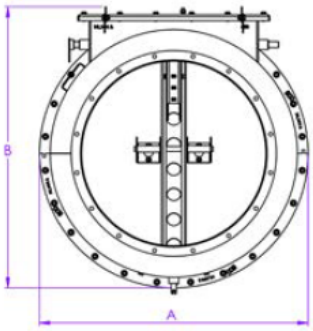
- Position indicator for NRV
- Dust level indicator for NRV


Airflow mounting


Release handle


Position indicator option



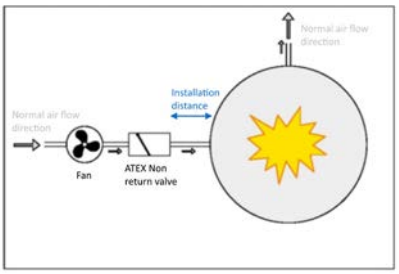


Dimensions

Ø d (mm)	A (mm)	B (mm)	C (mm)	E (mm)	F (mm)	S (mm)	Mass (kg)
204	470	510	590	137	52	3	45
254	520	555	620	137	52	3	52
304	570	610	640	137	52	3	60
354	620	660	670	137	52	3	70
404	670	710	735	157	52	3	83
454	720	760	785	157	52	3	94
504	770	810	835	157	52	3	106
554	820	860	885	157	52	3	118
604	870	910	935	157	52	3	130
653	985	1021	+/- 1090	247	71	3	169
703	1035	1072	+/- 1120	247	71	3	185
753	1085	1127	+/- 1150	247	71	3	199
803	1152	1213	+/- 1220	277	71	3	229
853	1202	1263	+/- 1340	277	71	3	241
903	1252	1313	+/- 1340	277	71	3	268
953	1302	1363	+/- 1340	277	71	3	281
1003	1352	1413	+/- 1340	277	71	3	294

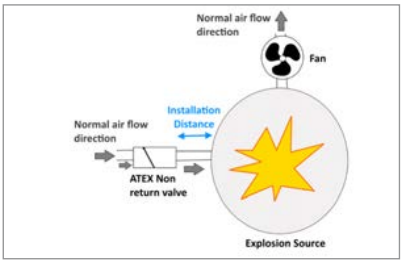
Push flow situation

Considering the normal process flow direction, the situation where the fan is located upstream of the explosion source.



Pull flow situation

Considering the normal process flow direction, the situation where the fan is located downstream of the explosion source.



- Installation, operation, maintenance and repair in areas with danger of explosions may only be carried out by qualified personnel.
- Ensure that no tools, nuts, bolts, or assembly parts remain in the machine during assembly or maintenance.
- Selection and installation of the electrical parts within hazardous areas shall be carried out according to EN60079-14 and the installation instructions of the specific equipment.
- No potential difference between all metal parts within the non-return valve, or between non-return valve and earth may exist. Therefor earthing resistance between all metal parts and earth shall be measured before operation and shall be maximum 1 MΩ between individual items and to earth and the connected process structure. An earthing resistance higher than 10Ω may indicate bad earth connections.
- An earth connection is provided externally on both sides and a lid of the valve. The external earth connections shall be used to bond other process parts with a equipotential bonding conductor of at least 4 mm2.
- The valve should only be exposed to organic or non-metallic dust.
- Ambient temperature range: from -20 °C to +60 °C.
- Parameters of the dust: organic non-metal dust, Kst,max =200 bar*m/s, MIE=13 mJ, MIT=430 °C.
- DN 200 – 400: Pull and Push, straight pipes or 2x90° bends (1,5mm full welded) are allowed between the protected vessel and the flap.
- DN 450 – 1000: Pull flow situation, only straight pipes are allowed between non-return valve and vessel equipped with non-reclosing venting elements . This excludes e.g. suppression and venting with reclosing vent devices.
- The maximum air flow speed is 25 m/s;
- The maximum dust concentration in the ducting is without limit.
- The product has to be installed so that the propagating brush discharges on the external surface of the device are avoided.
- The electrical devices installed together with the back-pressure flap must have the type of protection corresponding with the defined explosive zone.
- Non-return valve position is horizontal.