



IN-LINE DEFLAGRATION FLAME ARRESTER



**ECCENTRIC
DESIGN**

**OPERATING
TEMPERATURE
OF +60°C/
140°F**

**MODULAR
DESIGN**



FA-E

In-Line Deflagration Flame Arrester eccentric design, bidirectional

The PROTEGO® FA-E series of in-line deflagration flame arresters is designed with an eccentric housing to automatically drain condensate build up in the housing. Due to its eccentric design, the device can be installed in pipelines that run close to floors or walls and low points to prevent the build-up of condensate.

When installing the deflagration flame arrester, make sure that the distance between potential ignition sources and the location of the installed device does not exceed the L/D ratio (pipe length/pipe diameter) for which the device was approved. According to EN ISO 16852, the installation limits are $(L/D)_{max} \leq 50$ for deflagration flame arresters of explosion groups IIA and IIB3 (NEC groups D to C)

Features

- Eccentric design prevents condensate build up
- Special design for elevated operating temperatures and pressures available
- Modular design enables each individual FLAMEFILTER® to be replaced
- Service friendly: FLAMEFILTER® can be cleaned easily
- Eccentric design eases installation close to floors and walls
- Bi-directional flame transmission proof design
- Protects against deflagrations for all explosion groups IIA, IIB3 and IIC (NEC groups D, C and B)
- Modular design reduces spare parts cost



Dimensions

Expl.Gr.	DN	25 / 1"	32 / 1¼"	40 / 1½"	50 / 2"	65 / 2½"	80 / 3"	100 / 4"	125 / 5"	150 / 6"	200 / 8"	250 / 10"	300 / 12"
IIA	a	304 / 11.97	304 / 11.97	310 / 12.20	314 / 12.36	360 / 14.17	364 / 14.33	370 / 14.57	434 / 17.09	440 / 17.32	450 / 17.72	480 / 18.90	500 / 19.69
IIB3	a	304 / 11.97	304 / 11.97	310 / 12.20	314 / 12.36	360 / 14.17	364 / 14.33	370 / 14.57	434 / 17.09	440 / 17.32	450 / 17.72	480 / 18.90	500 / 19.69
IIC	a	304 / 11.97	304 / 11.97	321 / 12.64	325 / 12.80	371 / 14.61	375 / 10.83	381 / 15.00	445 / 17.52	451 / 17.76	461 / 18.15	491 / 19.33	511 / 20.12
	b	29 / 1.14	29 / 1.14	29 / 1.14	29 / 1.14	38 / 1.49	38 / 1.49	39 / 1.53	65 / 2.56	65 / 2.56	55 / 2.17	58 / 2.28	60 / 2.36
	c	185 / 7.28	185 / 7.28	210 / 8.27	210 / 8.27	250 / 9.84	250 / 9.84	275 / 10.83	385 / 15.16	385 / 15.16	450 / 17.72	500 / 19.69	575 / 22.64
	d	400 / 15.75	400 / 15.75	410 / 16.14	410 / 16.14	440 / 17.32	440 / 17.32	460 / 18.11	520 / 20.47	520 / 20.47	540 / 21.26	570 / 22.44	600 / 23.62

Dimensions in mm / inches

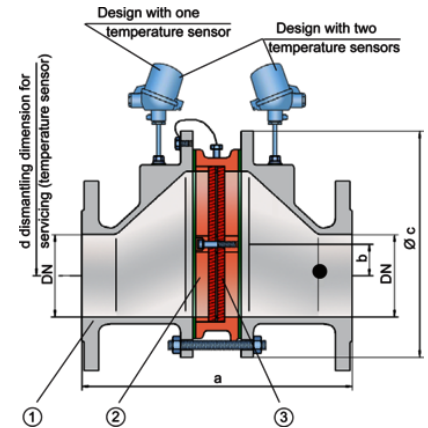
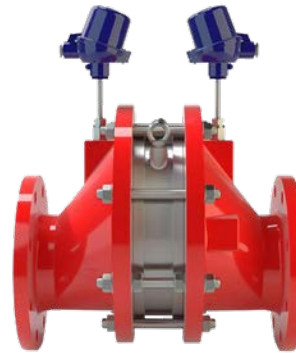
Selection of explosion group

MESG	Expl. Gr. (IEC / CEN)	Gas Group (NEC)
> 0,90 mm	IIA	D
≥ 0,65 mm	IIB3	C
< 0,50 mm (> 0,50 mm)	IIC	B

Special approvals upon request

Specification of max. operating temperature

≤ 60°C / 140°F	Maximum allowable operating temperature in °C	Higher operating temperatures upon request
–	Designation	



Specification of max. operating pressure

Expl.Gr.	DN	25 / 1"	32 / 1¼"	40 / 1½"	50 / 2"	65 / 2½"	80 / 3"	100 / 4"	125 / 5"	150 / 6"	200 / 8"	250 / 10"	300 / 12"
IIA	Pmax	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2
IIB3	Pmax	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2
IIC	Pmax	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9

Pmax = maximum allowable operating pressure in bar / psi (absolute), higher operating pressure upon request

Material

Expl.Gr.	DN	25 / 1"	32 / 1¼"	40 / 1½"
IIA	Pmax	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2
IIB3	Pmax	1,6 / 23.2	1,6 / 23.2	1,6 / 23.2
IIC	Pmax	1,1 / 15.9	1,1 / 15.9	1,1 / 15.9

Material selection for housing

Design	B	C	D	The housing can also be delivered in carbon steel with an ECTFE coating. Special materials upon request.
Housing	Steel	Steel	Hastelloy	
Gasket	PTFE	PTFE	PTFE	
Flame arrester unit	A, C	C	D	

Material selection for housing

Design	A	C	D	*The FLAMEFILTER® is also available in the materials Tantalum, Inconel, Copper, etc. when the listed housing and cage materials are used. Special materials upon request.
FLAMEFILTER® cage	Steel	Stainless Steel	Hastelloy	
FLAMEFILTER®	Stainless Steel	Stainless Steel	Hastelloy	
Spacers	Stainless Steel	Stainless Steel	Hastelloy	

Flange connection type

EN 1092-1; Form B1	Other types upon request
ASME B16.5; 150lbs RFSF	