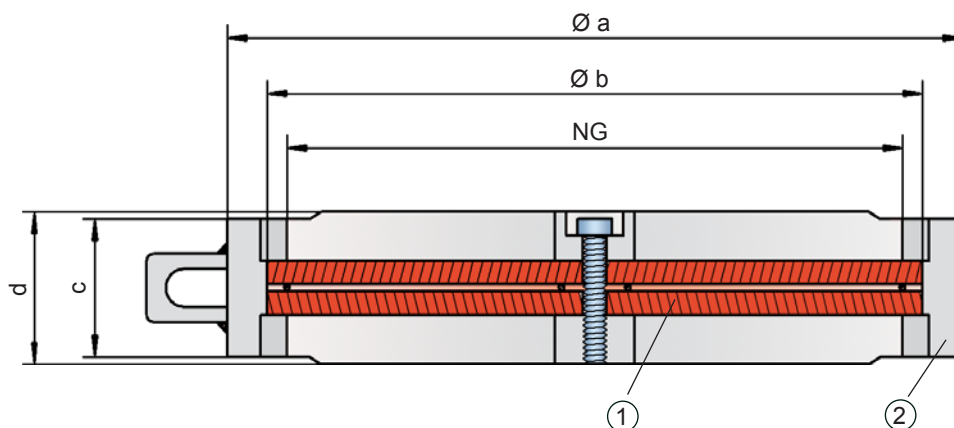


Flame Arrester Unit

for installation in devices



PROTEGO® FA-I-FC



Function and Description

The PROTEGO® FA-I-FC flame arrester units are components installed on or within equipment (e.g. blowers) and have to be tested and approved with this equipment for the respective operating conditions of use. It consists of a FLAMEFILTER® cage filled with FLAMEFILTER®. The FLAMEFILTER® cages are sized so that they can be installed between flange connections. The component provides equipment manufacturers protection against deflagrations, volume deflagrations or protection of engines. Each flame arrester unit is selected from a modular system that provides each manufacturer the option of using optimized, adapted, and cost-effective protection. Our expert technical staff will assist you with the proper selection of the devices as well as execution of type testing.

The FA-I-FC flame arrester unit consists of two FLAMEFILTER® (1) installed within the FLAMEFILTER® cage (2). The FLAMEFILTER® diameter and gap size depend on the intended use. FA-I-FC components can be arranged for all explosion groups and special gases such as ethylene oxide.

Special Features and Advantages

- cost-effective alternative to complete flame arresters with flange connection
- customized protection for machines and engines
- available sizes from DN 50 / 2" to DN 2000 / 80"
- modular design provides optimal flame arrester unit for every application
- flexible design parameters result in lowest pressure drops
- modular flame arrester unit enables individual FLAMEFILTER® to be replaced and cleaned
- modular design reduces spare parts cost
- worldwide, long-term availability of spare parts
- needs to be type tested for specific application together with equipment

Design and Specifications

Basic flame arrester unit design

FA-I-FC

Table 1: Dimensions

Dimensions in mm / inches

NG	50 / 2"	80 / 3"	100 / 4"	150 / 6"	200 / 8"	250 / 10"	300 / 12"	350 / 14"	400 / 16"
a		135 / 5.31	155 / 6.10	194 / 7.64	248 / 9.76	310 / 12.20	363 / 14.29	420 / 16.54	465 / 18.31
b		90 / 3.54	110 / 4.33	172 / 6.77	225 / 8.86	285 / 11.22	331 / 13.03	380 / 14.96	430 / 16.93
c		50 / 1.97	50 / 1.97	55 / 2.17	65 / 2.56	–	70 / 2.76	–	70 / 2.76
d		–	–	–	–	76 / 2.99	–	86 / 3.39	–

NG	500 / 20"	600 / 24"	800 / 32"	1000 / 40"	1200 / 48"	1400 / 56"	1600 / 64"	2000 / 80"
a	555 / 21.85	655 / 25.79	855 / 33.66	1070 / 42.13	1280 / 50.39	1500 / 59.06	1700 / 66.93	
b	515 / 20.28	615 / 24.21	815 / 32.09	1015 / 39.96	1215 / 47.83	1415 / 55.71	1615 / 63.58	
c	70 / 2.76	70 / 2.76	80 / 3.15	90 / 3.54	90 / 3.54	110 / 4.33	110 / 4.33	
d	–	75 / 2.95	85 / 3.35	95 / 3.74	95 / 3.74	115 / 4.53	115 / 4.35	

Table 2: Selection of FLAMEFILTER® gap / Explosion group

FLAMEFILTER® gap	MESG	Expl. Gr. (IEC/CEN)	Gas Group (NEC)
0,9 mm	> 0,90 mm	IIA	D
0,7 mm			
0,5 mm	≥ 0,65 mm	IIB3	C
0,3 mm	≥ 0,50 mm	IIB	
0,2 mm	< 0,50 mm	IIC	B

Table 3: Material selection of Flame arrester unit

Design	A	B	C	
FLAMEFILTER® cage	Steel	Stainless steel	Hastelloy	Special materials upon request
Gasket	PTFE	PTFE	PTFE	
FLAMEFILTER® Set	A, B	B	C	

Table 3: Material selection of FLAMEFILTER® Set

Design	A	B	C	
FLAMEFILTER® *	Stainless steel	Stainless steel	Hastelloy	* the FLAMEFILTER® is also available in the materials Tantalum, Inconel, Copper, etc. when the listed cage materials are used
Spacers	Stainless steel	Stainless steel	Hastelloy	

Special materials upon request

Flow capacity curves are provided for each individual application

