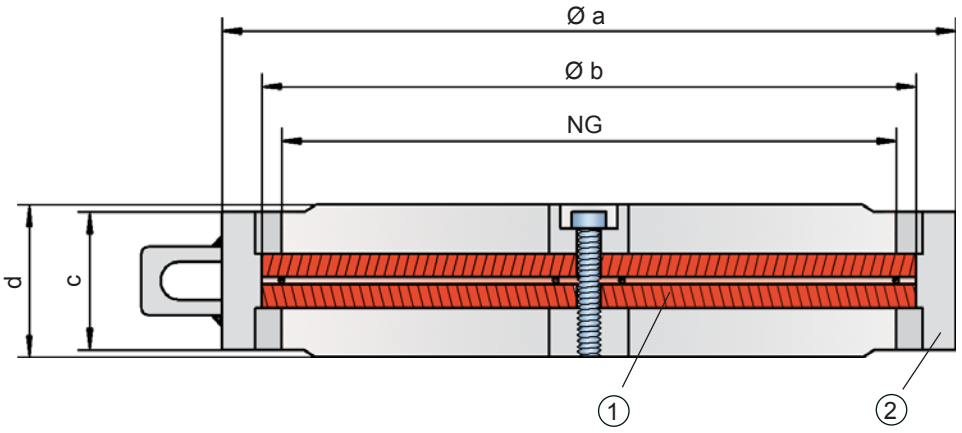
Flame Arrester Unit

for installation in devices

PROTEGO® FA-I-FC



Function and Description

The PROTEGO® FA-I-FC flame arrester unit is type tested and approved as an integral part of equipment. It consists of a FLAMEFILTER® cage (2) filled with FLAMEFILTER® (1). 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 PROTEGO® 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 PROTEGO® FA-I-FC flame arrester unit consists of two FLAMEFILTER® installed within the FLAMEFILTER® cage. The FLAMEFILTER® diameter and gap size depend on the intended use. PROTEGO® 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 design 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	–

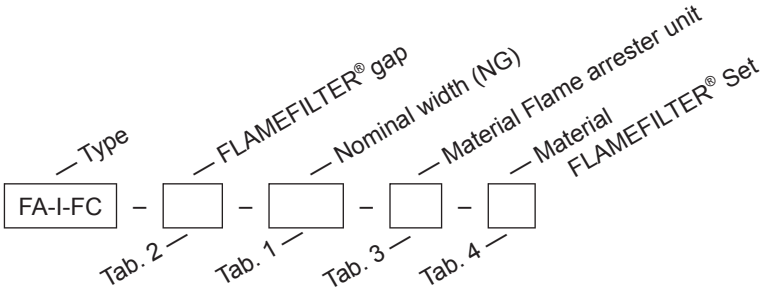
NG	500 / 20"	600 / 24"	800 / 32"	1000 / 40"	1200 / 48"	1400 / 56"	1600 / 64"	2000 / 80"	
a	555 / 21.85	655 / 25.79	855 / 33.66	1070 / 42.13	1280 / 50.39	1500 / 59.06	1700 / 66.93		
b	515 / 20.28	615 / 24.21	815 / 32.09	1015 / 39.96	1215 / 47.83	1415 / 55.71	1615 / 63.58		
c	70 / 2.76	70 / 2.76	80 / 3.15	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/NFPA)
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	Special materials upon request
FLAMEFILTER® cage	Steel	Stainless steel	Hastelloy	
Gasket	WS 3822	PTFE	PTFE	
FLAMEFILTER® Set	A	A	C	

Table 3: Material selection of FLAMEFILTER® Set			
Design	A	C	* the FLAMEFILTER® is also available in the materials Tantalum, Inconel, Copper, etc. when the listed cage materials are used.
FLAMEFILTER® *	Stainless steel	Hastelloy	
Spacers	Stainless steel	Hastelloy	

Special materials upon request



Order example

FA-I-FC – 0.5 – 600 – B – A

Materials and chemical resistance: See Vol. 1 “Technical Fundamentals”

Flow capacity curves are provided for each individual application.