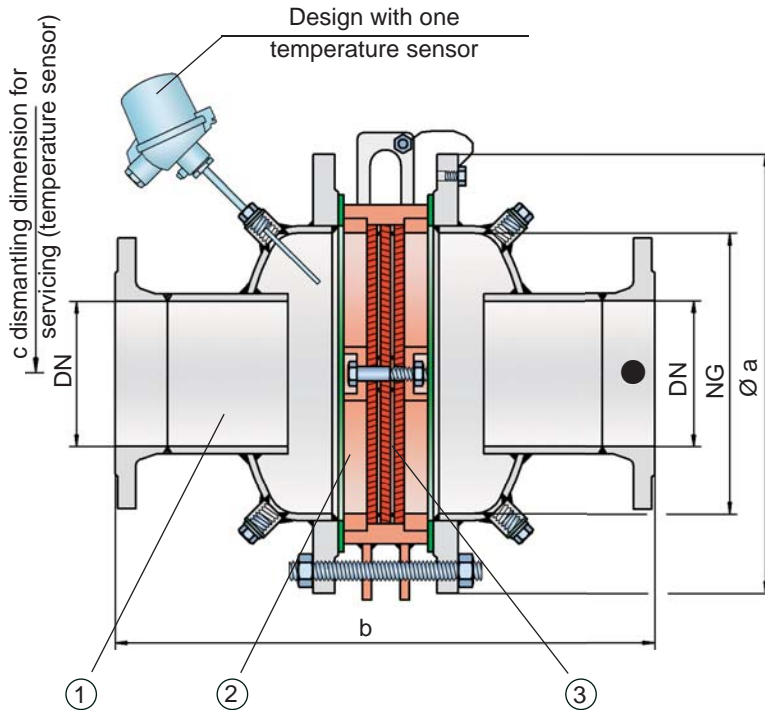


Flame Arrester

for vacuum pumps, compressors and blowers

PROTEGO® FA-I-V and FA-I-P



- Connection to the protected side (only for type FA-I-V-T-....)

Special Features and Advantages

- customized protection for vacuum pumps, blowers and compressors
- modular design provides every user with the optimal flame arrester
- 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

Function and Description

PROTEGO® FA-I-V and FA-I-P flame arresters are specifically designed for vacuum pumps, blowers, and compressors. The high flow velocity in the small gaps of these machines can lead to undesirable ignitions within the housing. One of the safest measures against explosion propagation are flame arrester units that are installed on the vacuum and pressure side of the equipment. PROTEGO® FA-I-V devices for the vacuum side and PROTEGO® FA-I-P devices for the pressure side provide a unique modular design that gives every manufacturer of vacuum pumps or comparable devices the option of using optimized and adapted flame arresters. Our expert technical staff will assist you with the proper selection of the devices as well as execution of type testing.

PROTEGO® FA-I-V and FA-I-P devices are symmetrical in design. The arrester essentially consists of two housing parts (1) and the PROTEGO® flame arrester unit (2) in the center. The PROTEGO® flame arrester unit is modular and consists of several FLAMEFILTER® (3) and spacers firmly held in a FLAMEFILTER® cage. The number of FLAMEFILTER® and their gap size depends on the arrester's conditions of use. PROTEGO® FA-I-V and FA-I-P flame arresters are available for explosion groups IIA to IIC (NEC groups D to B) and special gases such as ethylene oxide.

Design and Specifications

There are five different designs:

Flame arrester for low pressure side in the basic design **FA-I-V**

Flame arrester for the low pressure side with integrated temperature sensor* for additional protection against short-time burning on one side **FA-I-V-T**

Flame arrester for the pressure side in the basic design **FA-I-P**

Flame arrester for the pressure side with integrated temperature sensor* for additional protection against short-time burning on one side (recommended) **FA-I-P-T**

Additional special devices are available upon request

*Resistance thermometer for device group II, category (1) 2 (GII cat. (1) 2)

Flow capacity curves are provided for each individual application.

Table 1: Dimensions		Dimensions in mm / inches						
Series 1								
DN		50 / 2"	80 / 3"	100 / 4"	150 / 6"	200 / 8"	250 / 10"	
Series 2								
DN		-	-	80 / 3"	100 / 4"	150 / 6"	200 / 8"	
Series 3								
DN		-	-	-	80 / 3"	100 / 4"	150 / 6"	
Series 4								
DN		-	-	-	-	80 / 3"	-	
NG		150 / 6"	150 / 6"	200 / 8"	300 / 12"	400 / 16"	500 / 20"	
a		285 / 11.22	285 / 11.22	340 / 13.39	445 / 17.52	565 / 22.24	670 / 26.38	
Number of FLAMEFILTER®	2	b	364 / 14.33	364 / 14.33	452 / 17.80	584 / 22.99	638 / 25.12	688 / 27.09
	3	b	376 / 14.80	376 / 14.80	464 / 18.27	596 / 23.46	650 / 25.59	700 / 27.56
	4	b	388 / 15.28	388 / 15.28	476 / 18.74	608 / 23.94	662 / 26.06	712 / 28.03
	5	b	400 / 15.75	400 / 15.75	488 / 19.21	628 / 24.72	690 / 27.17	752 / 29.61
	6	b	412 / 16.22	412 / 16.22	500 / 19.69	640 / 25.20	702 / 27.17	764 / 30.08
	7	b	-	-	500 / 19.69	650 / 25.59	-	-
	8	b	-	-	-	662 / 26.06	-	-
	c		500 / 19.69	500 / 19.69	520 / 20.47	570 / 22.44	620 / 24.41	570 / 26.38

Table 2: Selection of FLAMEFILTER® gap / Explosion group			
FLAMEFILTER® gap	MESG	Expl. Gr. (IEC/CEN)	Gas Group (NEC/NFPA)
0.7 mm	> 0.90 mm	IIA	D
0.5 mm	≥ 0.65 mm	IIB3	C
0.3 mm	≥ 0.50 mm	IIB	C
0.2 mm	< 0.50 mm	IIC	B

Table 3: Material selection for housing			
Design	A	B	C
Housing	Steel	Stainless steel	Hastelloy
Gasket	WS 3822	PTFE	PTFE
Flame arrester unit	A, B	B	C

The housing can also be delivered in steel with an ECTFE coating.
Special materials upon request

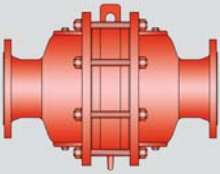
Table 4: Material combinations of the flame arrester unit			
Design	A	B	C
FLAMEFILTER® cage	Steel	Stainless steel	Hastelloy
FLAMEFILTER®*	Stainless steel	Stainless steel	Hastelloy
Spacers	Stainless steel	Stainless steel	Hastelloy

* 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

Table 5: Flange connection type		
EN 1092-1, Form B1 or DIN 2501, Form C, PN 16; from DN 200 PN 10	EN or DIN	other types upon request
ANSI 150 lbs RFSF	ANSI	



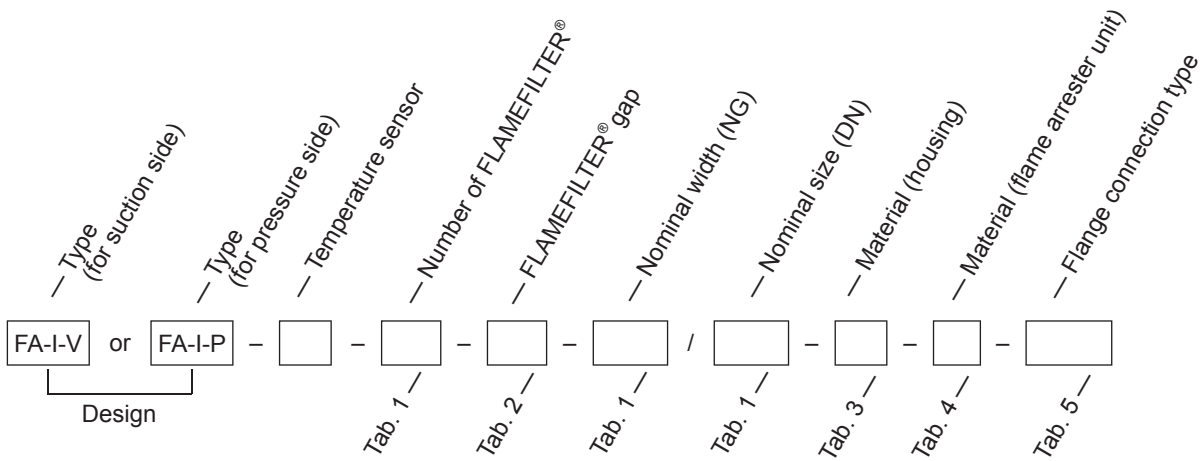
for safety and environment



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for vacuum pumps, compressors and blowers

PROTEGO® FA-I-V and FA-I-P



Order example

FA-I-V - - T - * - 0.5 - 300 / 150 - B - B - DIN

* according to type-approval

Materials and chemical resistance: See Vol. 1 "Technical Fundamentals"