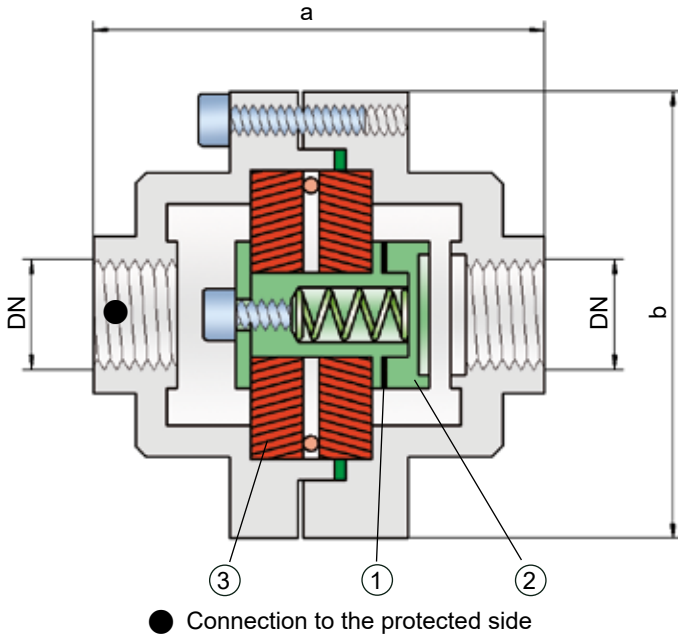


In-Line Detonation Flame Arrester

with shut-off valve,
for stable detonations and deflagrations in a straight through design, uni-directional

PROTEGO® DR/SV



Once a detonation enters the flame arrester, energy is absorbed from the detonation shock wave by the central plate disc (2) before the flame is extinguished in the narrow gaps of the two FLAMEFILTER® discs (3). This device can be used for fluids of explosion group IIA (NEC group D).

The in-line detonation flame arresters are unidirectional and equipped with a threaded connection. The thread can be executed to international standards. The standard design can be used up to an operating temperature of +60°C / 140°F and an (absolute) operating pressure up to 1.1 bar / 15,9 psi.

Type-approved according to ATEX Directive and EN 12874 as well as other international standards.

Special Features and Advantages

- protects against stabilized burning
- no expensive emergency switch-offs are required
- temperature monitoring is not necessary
- minimum number of FLAMEFILTER® discs
- easy to maintain
- the individual FLAMEFILTER® discs can be quickly removed and installed
- the FLAMEFILTER® discs can be individually replaced
- provides protection from deflagrations and stable detonations
- ideal protective system for vacuum pumps
- cost efficient spare parts

Function and Description

The PROTEGO® DR/SV flame arrester series ideally combines the function of a detonation arrester with the advantages of a shut-off valve. In case of ignition, the fire can be stabilized within the flame arrester when the flammable gas continues to flow. Inside the detonation arrester, is a valve (1) that closes in case of fire, stops the additional supply of fuel and extinguishes the flames. Temperature sensors in combination with an emergency switch off do not have to be installed if the type PROTEGO® DR/SV device is used. This device is particularly useful for the suction-side protection of compressors and pumps.

The flame arrester protects against deflagrations and stable detonations. It can be installed anywhere in the pipe independently from the distance of the potential ignition source.

Table 1: Dimensions

Dimensions in mm / inches

To select the nominal size (DN), please use the flow capacity chart on the following page

DN	G 1/2"	G 3/4"
a	115 / 4.53	115 / 4.53
b	100 / 3.94	100 / 3.94

Table 2: Selection of the explosion group

MESG	Expl. Gr. (IEC/CEN)	Gas Group (NEC)	Special approvals upon request.
> 0,90 mm	IIA	D	

Table 3: Selection of max. operating pressure

DN	G 1/2"	G 3/4"	P _{max} = maximum allowable operating pressure in bar / psi (absolute), higher operating pressure upon request.
P _{max}	1.1 / 15.9	1.1 / 15.9	

Table 4: Specification of max. operating temperature

≤ 60°C / 140°F	Tmaximum allowable operating temperature in °C	Higher operating temperatures upon request.
-	Classification	

Table 5: Material selection for housing

Design	A	B	Special materials upon request.
Housing	Brass	Stainless Steel	
Gasket	PTFE	PTFE	
Flame arrester unit	A	A, B	

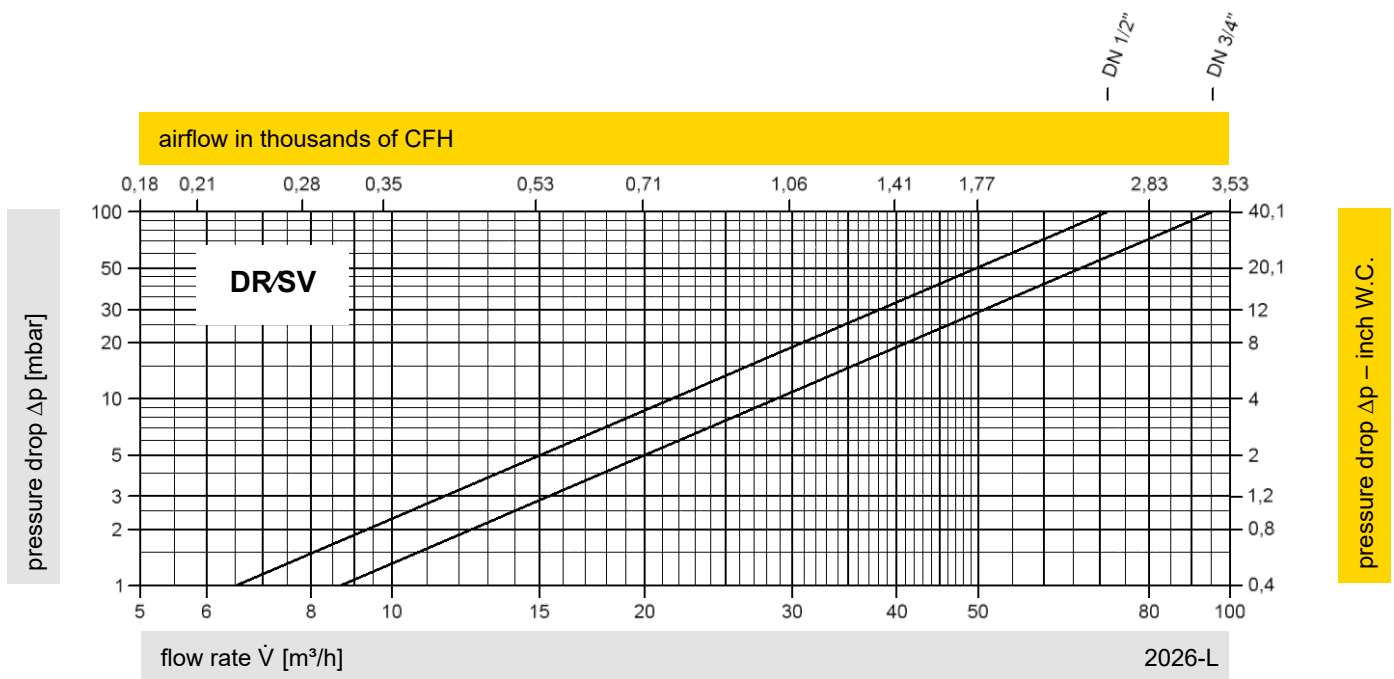
Table 6: Material combinations of the flame arrester unit

Design	A	B	*The FLAMEFILTER® is also available in Tantalum, Inconel, Copper, etc., when the listed housing and casing materials are used.
FLAMEFILTER® *	Stainless Steel	Stainless Steel	
Spacer	Stainless Steel	Stainless Steel	
Support for FLAMEFILTER®	Brass	Stainless Steel	
Washer	Brass	Stainless Steel	

Table 7: Type of connection

Pipe thread DIN ISO 228-1	DIN	Other types of thread upon request.
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Flow Capacity Chart



The flow capacity charts have been determined with a calibrated and TÜV certified flow capacity test rig. Volume flow \dot{V} in (m³/h) and CFH refer to the standard reference conditions of air in ISO 6358 (20°C, 1bar). For conversion to other densities and temperatures, refer to Sec. 1: "Technical Fundamentals."

