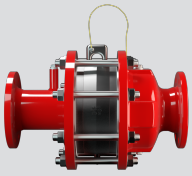
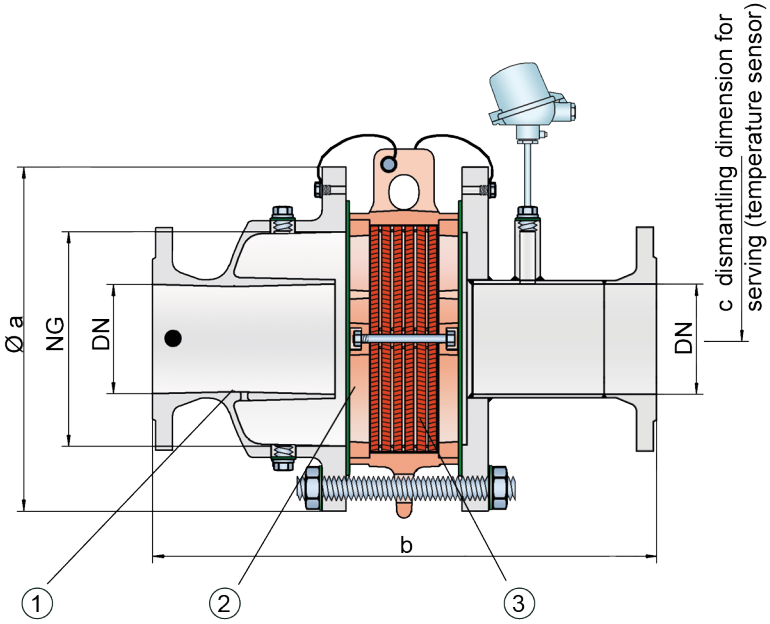


In-Line Detonation Flame Arrester

for stable detonations and deflagrations in a straight through design, uni-directional

PROTEGO® DAZ-S



● Connection to the protected side

Table 1: Dimensions Dimensions in mm / inches

To select nominal width/nominal size (NG/DN) - combination, please use the flow capacity charts on the following pages
Additional nominal width/nominal size (NG/DN) - combinations for improved flow capacity upon request

NG		200 / 8"	300 / 12"
DN		≤100 / 4"	≤150 / 6"
a		340 / 13.39	445 / 17.52
b	IIC-P1,2-X2	-	640 / 25.20
	IIC-P1,2-X3	500 / 19.69	-
	IIC-P1,3	-	640 / 25.20
c		415 / 16.34	570 / 22.44

Features and Advantages

- state of the art protection for hydrogen/air mixture
- minimal pressure loss resulting in low operating and lifecycle costs
- advanced design for higher operating temperatures and pressures
- installation of temperature sensors possible
- modular design enables replacement of the individual FLAMEFILTER®
- maintenance-friendly design
- cost-effective spare parts

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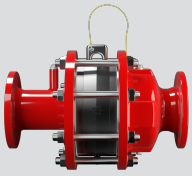

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PROTEGO® DAZ-S

Function and Description

The in-line detonation flame arresters type PROTEGO® DAZ-S are unidirectional flame arresters of the newest generation. The unidirectional (effective on one side) devices protect potentially explosive plants or plant sections (tanks, machines etc.) against ingression of flames which propagate from an ignition source in a pipe as a pipe deflagration or detonation. Based on flow and explosion dynamic calculations as well as decades of field tests, a product line was developed that offers minimum pressure losses with maximum safety.

The arrester essentially consists of two different 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® discs (3) and spacers firmly held in a FLAMEFILTER® casing.

The number of FLAMEFILTER® discs and their gap size depends on the arrester's intended use. The PROTEGO® DAZ-S flame arresters are available for explosion group IIC (NEC B).

The standard design can be used with an operating temperature of up to +60°C / 140°F . Numerous devices with special approval for higher pressures (see table 3) and higher temperatures (see table 4) are available upon request.

EU conformity according to the currently valid ATEX directive. Approvals according to other national/international regulations on request.

Design and Specifications

There are three different designs available:

Basic design of the detonation arrester	**DAZ-S-**
In-line detonation flame arrester with integrated temperature sensor* as additional protection against short time burning of one side	**DAZ-S-T**
In-line detonation flame arrester with heating jacket upon request	**DAZ-Z-H**

Additional special arresters upon request

*Resistance thermometer (Ex i II 1/2 G Ex ia IIC T1…T6 Ga/Gb)

Table 2: Selection of explosion group

MESG	Expl. Gr. (IEC / CEN)	Gas Group (NEC)
< 0,50 mm	IIC	B

Special approvals upon request

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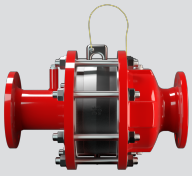

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PROTEGO® DAZ-S

Table 3: Selection of max. operating pressure

Marking	NG	200 / 8"	300 / 12"
	DN	≤100 / 4"'	≤150 / 6"
IIC-P1,2-X3	Pmax	-	1,2 / 17.4
IIC-P1,2-X2	Pmax	1,2 / 17.4	-
IIC-P1,3	Pmax	-	1,3 / 18.9

Pmax = maximum allowable operating pressure in bar / psi absolut, higher operating pressure upon request
in-between size up to Pmax upon request

Table 4: Specification of max. operating temperature

≤ 60°C / 140°F	≤ 180°C / 356°F	≤ 200°C / 392°F	Tmaximum allowable operating temperature in °C
-	X2	X3	Designation

Higher operating temperatures upon request

Table 5: Material selection for housing

Design	A	B
Housing	Steel	Stainless Steel
Heating jacket (DAZ-S-(T)-H-...)	Steel	Stainless Steel
Gasket	PTFE	PTFE
Flame arrester unit	A, B	B

The housing is also available in carbon steel with an ECTFE coating.
Special materials upon request

Table 6: Material combinations of flame arrester unit

Design	A	B
FLAMEFILTER® cage	Steel	Stainless Steel
FLAMEFILTER®*	Stainless Steel	Stainless Steel
Spacer	Stainless Steel	Stainless Steel

*Special materials upon request

Table 7: Flange connection type

EN 1092-1; Form B1
ASME B16.5 CL 150 R.F.

other connections upon request

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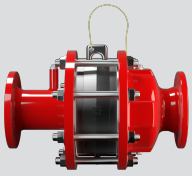

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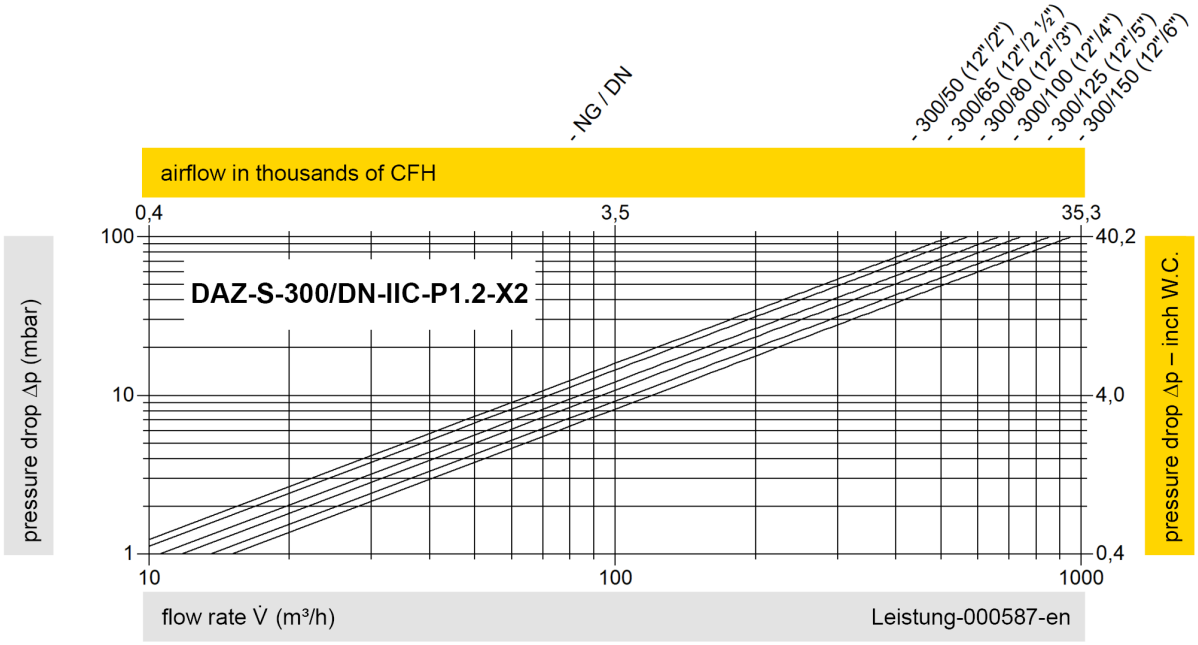
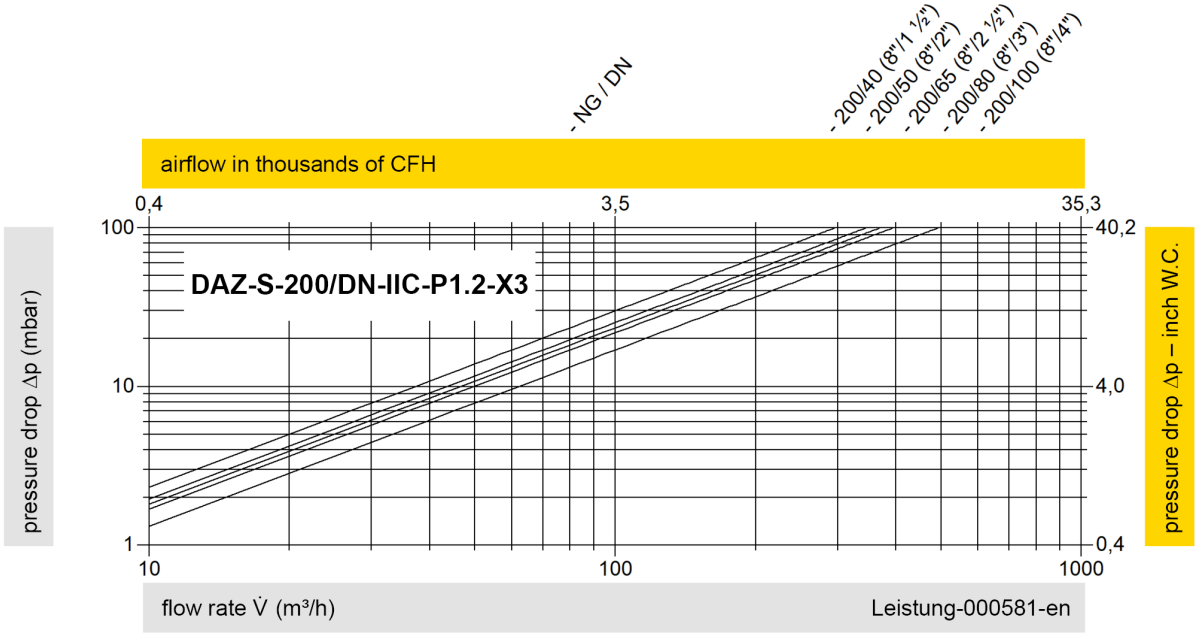
PROTEGO® DAZ-S

Flow Capacity Charts





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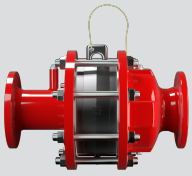

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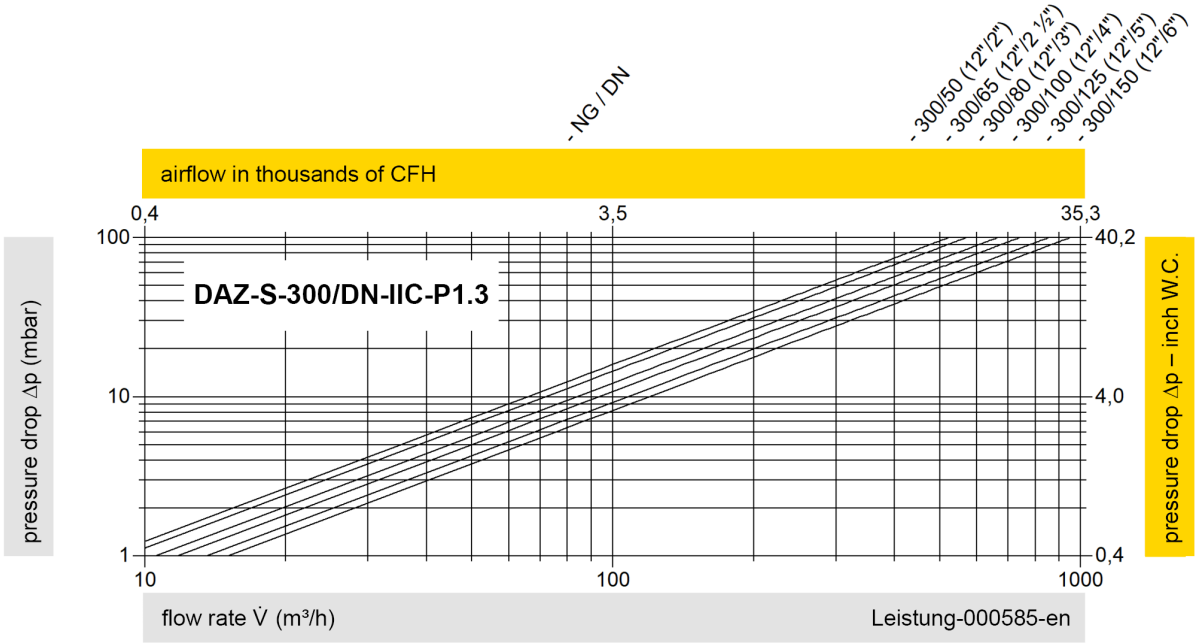

The flow capacity charts have been determined with a calibrated and TÜV certified flow capacity test rig. Volume flow V in (m³/h) and CFH refer to the standard reference conditions of air ISO 6358 (20°C, 1bar). For conversion to other densities and temperatures refer to Sec. 1: “Technical Fundamentals”.

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