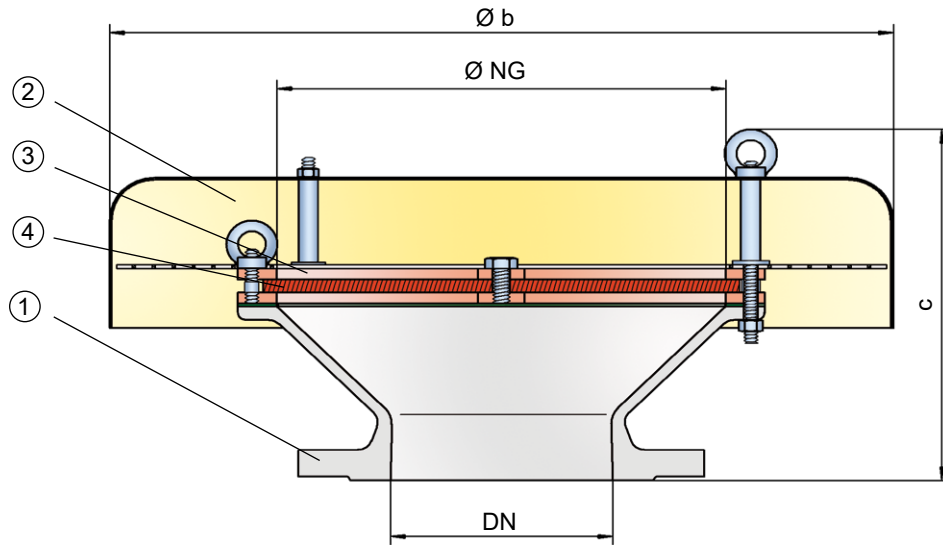


Deflagration Flame Arrester, End-of-Line

PROTEGO® LH/AD-IIB1-X0



Function and Description

The PROTEGO® LH/AD-IIB1-X0 end-of-line deflagration flame arrester was developed for vessels which are not pressurized and provides protection against flame transmission through atmospheric deflagration. For safe application, it is important that an endurance burning situation can be excluded. So typically, it is installed on vent lines which discharge vapor for a short time period. The device prevents flame transmission from atmospheric deflagration into the vessel or plant.

The PROTEGO® LH/AD consists of the housing (1), a weather hood (2), and the PROTEGO® flame arrester unit (3). The device is equipped with a metal weather hood. A protection screen is installed between the weather hood and the housing to keep out animals and foreign bodies. The FLAMEFILTER® (4) gap size depends on the device's intended use.

The PROTEGO® LH/AD-IIB1-X0 end-of-line deflagration flame arrester is suitable for gas/air mixtures for explosion group IIB1 (MESG $\geq 0,85\text{mm}$).

The standard design can be used with an operating temperature of up to $+100^\circ\text{C}$ / 212°F .

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

Special Features and Advantages

- approved for gas/air mixtures for explosion group IIB1 (MESG $\geq 0,85\text{mm}$)
- suitable for operating temperatures up to 100°C
- weather hood with protection screen protects the PROTEGO® flame arrester unit against environmental impact, such as nesting animals and weather conditions
- available for DN 50/2"- bis DN 500/20"- pipes
- trouble-free maintenance
- advanced design for higher operating temperatures
- provides protection against atmospheric deflagrations
- low operating and lifecycle costs
- cost-effective Flame arrester
- cost-effective spare parts

Design Type and Specification

End-of-line deflagration flame arrester, basic design

LH/AD-IIB1-X0

Special designs available upon request.

Table 1: Dimensions

Dimensions in mm / inches

To select the nominal size (DN), please use the flow capacity charts on the following pages.

DN	NG	b	c
50 / 2"	100 / 3.94	200 / 7.87	175 / 6.89
80 / 3"	150 / 5.91	240 / 9.45	180 / 7.09
100 / 4"	200 / 7.87	295 / 11.61	220 / 8.66
125 / 5"	250 / 9.84	350 / 13.78	240 / 9.45
150 / 6"	300 / 11.81	550 / 21.65	260 / 10.24
200 / 8"	300 / 11.81	550 / 21.65	260 / 10.24
250 / 10"	400 / 15.75	600 / 23.62	355 / 13.98
300 / 12"	400 / 15.75	600 / 23.62	340 / 13.39
350 / 14"	600 / 23.62	800 / 31.50	390 / 15.35
400 / 16"	600 / 23.62	800 / 31.50	380 / 14.96
500 / 20"	700 / 27.56	1000 / 39.37	400 / 15.75

Table 2: Selection of explosion group

MESG	Expl. Gr. (IEC/CEN)	Gas Group (NEC)	
≥ 0,85 mm	IIB1	-	Special approvals upon request.

Table 3: Specification of max. operating temperature

≤ 100°C / 212°F	Tmaximum allowable operating temperature in °C	
X0	Classification	Higher operating temperatures upon request.

Table 4: Material selection for housing

Design	A	B	
Housing	Steel	Stainless Steel	Special materials upon request.
Weather hood	Stainless Steel	Stainless Steel	
Protection screen	Stainless Steel	Stainless Steel	
Flame arrester unit	A, B	B	

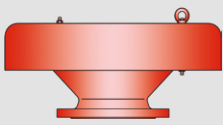
Table 5: Material combinations of flame arrester unit

Design	A	B	
FLAMEFILTER® casing	Steel	Stainless Steel	Special materials upon request.
FLAMEFILTER®	Stainless Steel	Stainless Steel	

Table 6: Flange connection type

EN 1092-1; Form B1	
ASME B16.5 CL 150 R.F.	Other types upon request.

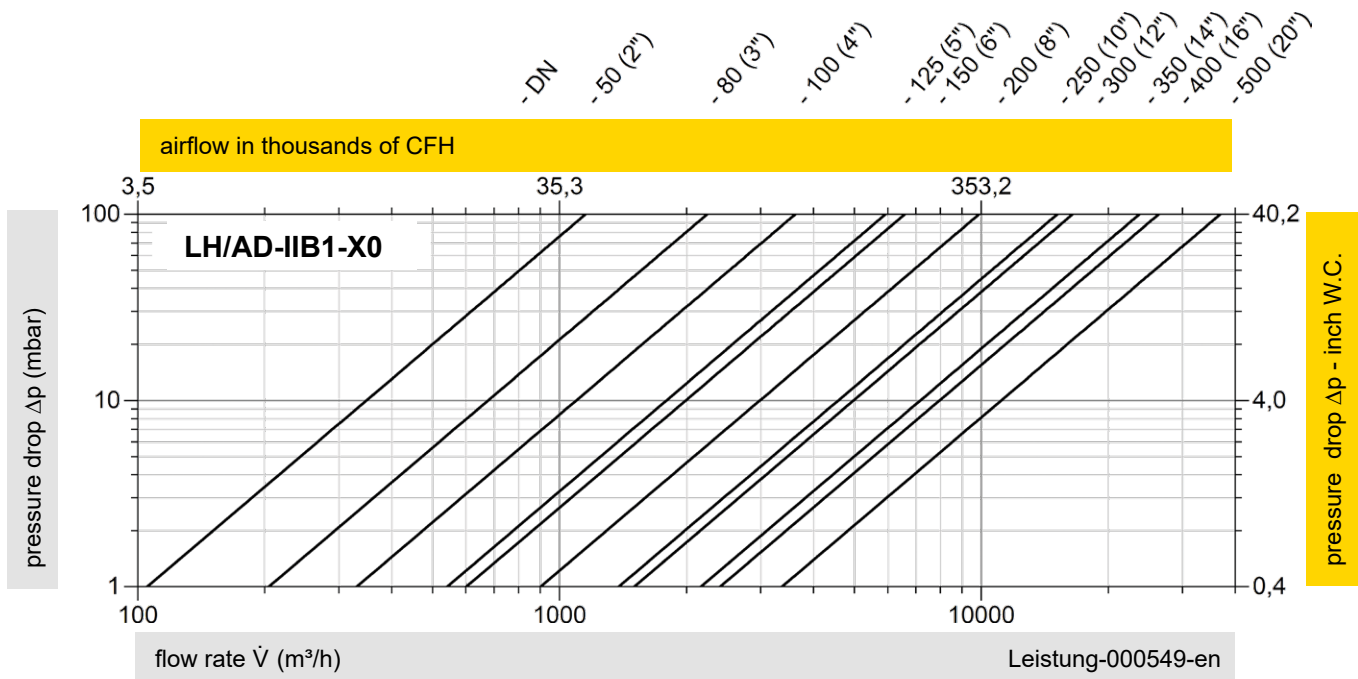




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Flow Capacity Charts

PROTEGO® LH/AD-IIB1-X0



The flow capacity charts have been determined with a calibrated and TÜV certified flow capacity test rig. Volume flow $\dot{V}$ in (m^3/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."