

Detonation flame arrester



LD

DIN PN 10 - 16 — DN 25 to 200 mm
ANSI 125 - 150 — 1" to 8"

11, 12, 17, 25

Application

LD series protectors from ASCA offer efficient protection against flame propagation in case of explosion and detonation of flammable liquids or gases. They are installed in the piping upstream from the equipment to be protected, such as tanks, reservoirs, burners, flares and the piping itself.

Applicable to fluid of IIA risk group, according to DIN or class D, according to NEC-USA standards

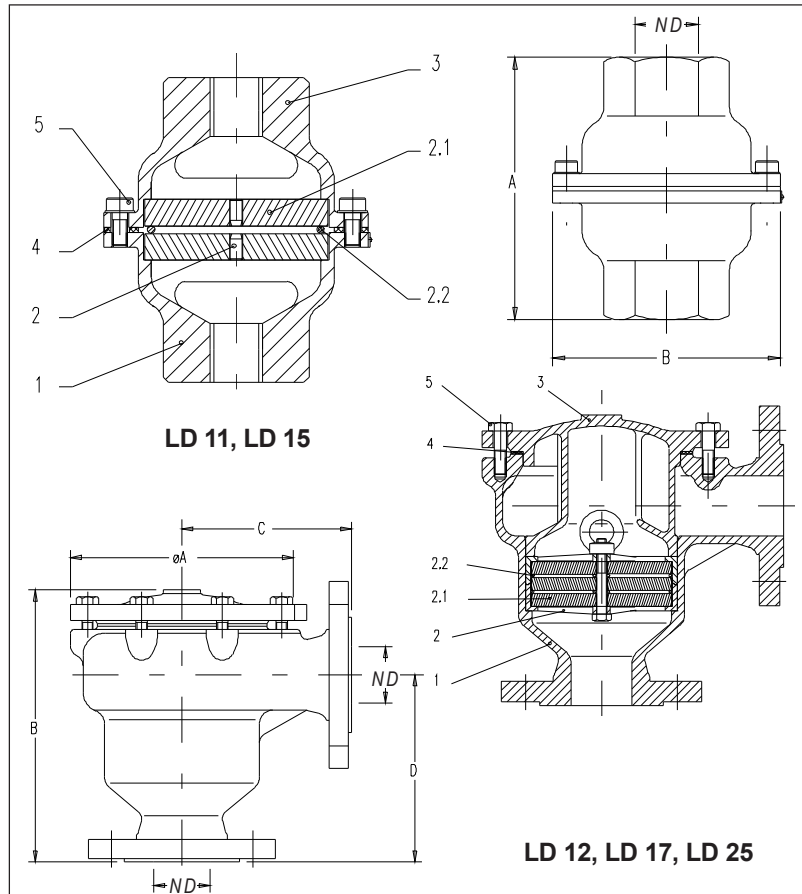
Main Characteristics

- Total safety against propagation of flames in piping, in cases of explosion and detonation;
- Easy to maintain due to the simple access to the flame arrester element;
- Low head loss, since the sum of the free areas of the flame arrester element is larger than the internal area of the piping;
- Triple flame arrester according to the MESG (Maximum experimental safe spacing) of each fluid.

Presentation

The protection against detonation from ASCA have straight passage (LD 11, 15) or angular (LD 12, 17, 25). They consist essentially of a body, labyrinth (pressure damper), cover and flame arrester set. For sizes 1 1/2" to 4", the labyrinth is incorporated to the cover. For sizes 6" and 8", the labyrinth and the cover are separated.

Ask for our sizing software



N°	Description	Quantities	
		LD 11, LD 15	LD 12, LD 17 LD 25
1	Body	1	1
2*	Arrester set	1	1
2.1	Flame arrester element	2	3
2.2	Spacer	1	2
3	Cover	1	1
4*	Sealing	1	1
5	Bolts	4	16

*Spare parts recommended

Technical competence, materials and connections

Model	LD 11	LD 15	LD 12	LD 17	LD 25			
Diameter inch nominal mm	25 1"	35 1 1/4"	40 1 1/2"	50 2"	80 3"	100 4"	150 6"	200 8"
Body	ASTM A 395 nodular iron	ASTM 351 CF 8M Stainless steel	ASTM A 395 nodular iron	ASTM A 395 nodular iron	ASTM A 216 WCB cast steel	ASTM A 216 WCB cast steel	ASTM 351 CF 8M Stainless steel	ASTM 351 CF 8M Stainless steel
Cover/frame	ASTM A 395 nodular iron	ASTM 351 CF 8M Stainless steel	ASTM A 395 nodular iron	ASTM A 395 nodular iron	ASTM A 216 WCB cast steel	ASTM A 216 WCB cast steel	ASTM 351 CF 8M Stainless steel	ASTM 351 CF 8M Stainless steel
flame arrester element	Stainless steel							
Sealing packing	Hydraulic paper							
Spacer	stainless steel							
Connections	BSP or NPT internal thread		Flanges according to DIN PN 10/16 or ANSI B 16.1 Class 150					

The arrester set, installed downstream from the labyrinth, extinguishes the flames by heat exchange process (see Technical Information 1201).

The flame arrester consists of a frame and two or three flame arrester elements separated by spacers.

The size of the flame arrester element channels is determined according to the specific characteristics of the product and

its classification according to the explosion group.

The diagram is valid for gases with specific weight of 1,3 kg/m³

For the conversion to use the formula:

$$Q_1 = Q \cdot y \cdot \sqrt{\frac{y_1}{y}}$$

Q = Flow equivalent in m³/min with specific weight of 1,3 kg/m³

y = 1,3 kg/m³

Q₁ = Actual flow in m³/min

y₁ = Actual specific weight in kg/m³

Measures & Weights

Models		LD 11	LD 15	LD 12		LD 17		LD 25	
ND	mm	25	32	40	50	80	100	150	200
	inch	1"	1 1/4"	1 1/2"	2"	3"	4"	6"	8"
Measures		mm							
	A	110	230	240	295	365	465	715	
	B	100	175	175	240	300	425	560	
	C	—	140	150	185	250	300	350	
	D	—	160	165	195	250	300	350	
Aprox. weight Kg		2,5	22,5	23	39,5	65,0	150,0	240,0	

Data for sizing

ASCA will gladly effect the sizing calculation. For this purpose the following must be supplied:

- Flow (m³/h)
- Admissible work load and pressure loss (mbar)
- Type of fluid and physical state
- Nominal diameter
- Distance between protector and risk source (m)

Standard specification

Protector against explosion

Model LD.....ASCA

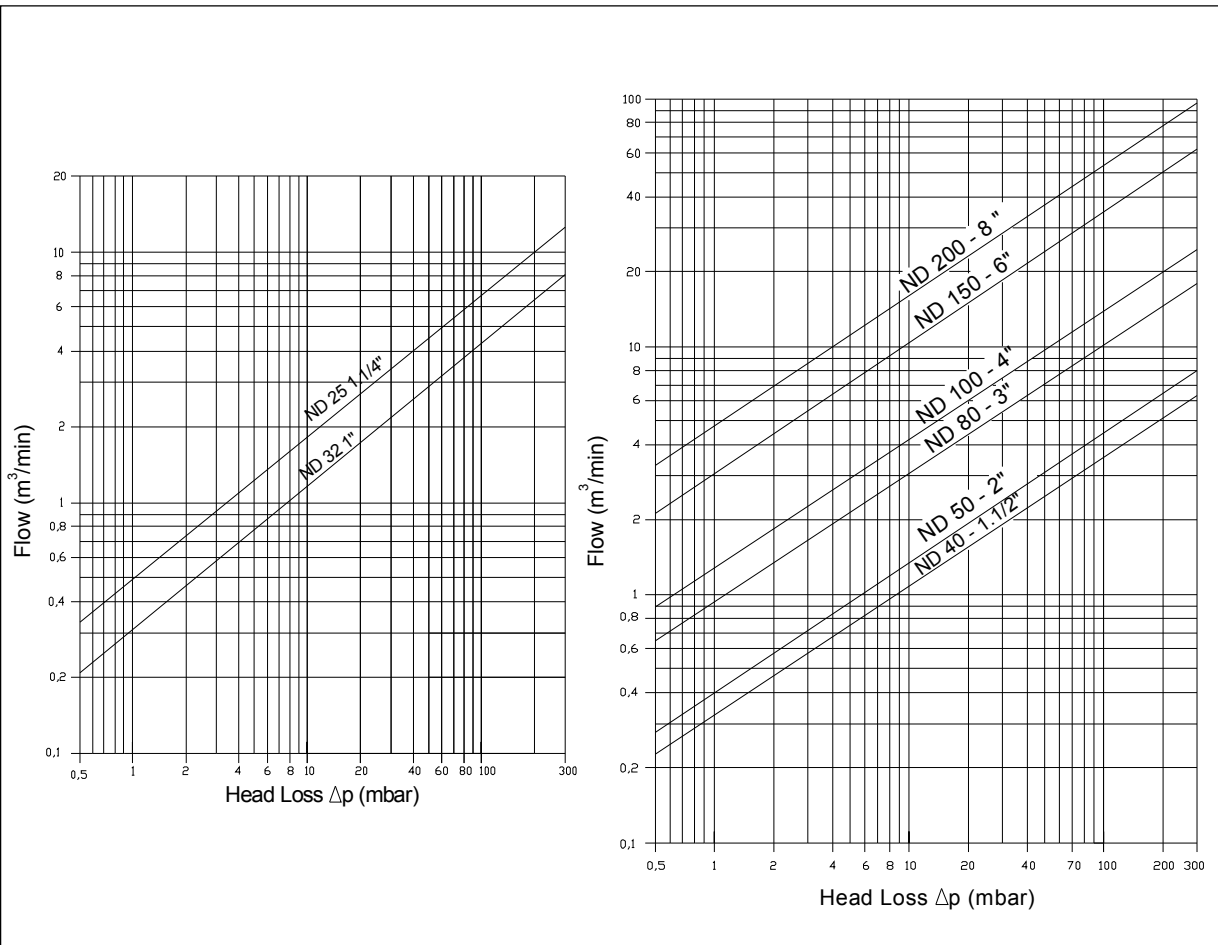
According to prospect PR-12.42.11-I

Data sheet

Connection

According to standard

Nominal diameter.....



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