

**EXPLOSION PROOF
IN-LINE FLAME ARRESTER**

FLAME ARRESTER



FA TYPE ATEX

EC-Type Examination Certificate N° FTZÚ 14 ATEX 0132X



Benefits

- Meet the latest international rule requirement of API 2000 and EN 12874
- Protection against explosion and deflagration flame
- High flow capacity and minimum pressure loss
- Available bi-directional flow and flame passage
- Available vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance chemical resistance material

General

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are present.

The model FA in-line flame arrester is designed, manufactured and tested according to API 2000 and EN 12874.

Body material of arrester is available for nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance.

The material of element is available for stainless steel grade 316L or special alloy steel for chemical resistance.

The flame element is constructed with crimped ribbon metal.

Specification of gas/air-mixtures for deflagration and detonation tests(EN12874:2001)

Range of Application (Marking)		Requirement for test mixture	
Explosion group	MESG of mixture (mm)	Gas type	Gas in air by volume(%)
IIA	> 0.90	Propane	4.2 ± 0.2
IIB1	≥0.85	Ethylene	5.0 ± 0.1
IIB2	≥0.75		5.5 ± 0.1
IIB3	≥0.65		6.5 ± 0.5
IIB	≥0.50	Hydorgen	45.0 ± 0.5
IIC	< 0.50	Hydorgen	28.5.2 ± 2.0

MESG : Maximum Experimental Safe Gap

PROSAVE

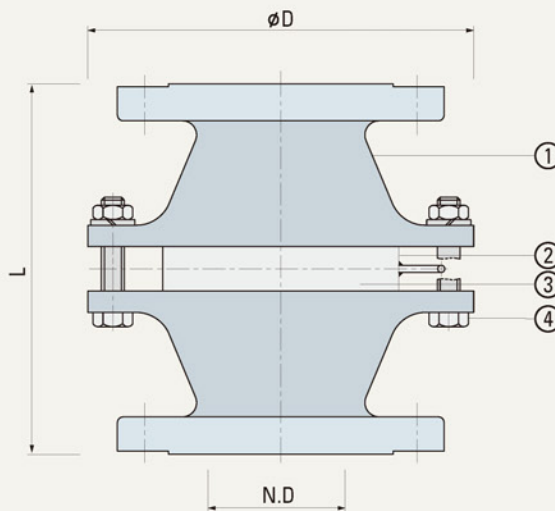
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**EXPLOSION PROOF
IN-LINE FLAME ARRESTER**

**PROSAVE
FLAME ARRESTER**

FA TYPE



Dimension Table

Unit = mm

TYPE	FA-1	FA-1 1/2	FA-2	FA-3	FA-4	FA-5	FA-6	FA-8	FA-10	FA-12	FA-14	FA-16	FA-18	FA-20	FA-22	FA-24
SIZE	25A	40A	50A	80A	100A	125A	150A	200A	250A	300A	350A	400A	450A	500A	550A	600A
N.D	25	40	50	80	100	125	150	200	250	300	350	400	450	500	250	250
øD	155	210	220	250	280	340	380	455	605	680	950	1150	1150	1300	1300	1500
L	225	230	230	250	260	290	320	340	365	450	650	720	720	850	850	1000
W.T(kg)	12	14	16	20	27	36	46	85	125	150	180	220	270	280	330	340

Materials of Construction

NO	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	ELEMENT RING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
4	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316

* Other material is available on special request by customers

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**EXPLOSION PROOF
END-LINE FLAME ARRESTER**

FLAME ARRESTER

FE TYPE



Benefits

- Meet the latest international rule requirement of API 2000 and EN 12874
- Protection against explosion and deflagration flame
- High flow capacity and minimum pressure loss
- Available bi-directional flow and flame passage
- Available vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance chemical resistance material

General

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are present.

The model end-line flame arrester is designed, manufactured and tested according to API 2000 and EN 12874.

Body material of arrester is available for nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance.

The material of element is available for stainless steel grade 316L or special alloy steel for chemical resistance.

The flame element is constructed with crimped ribbon metal.

Specification of gas/air-mixtures for deflagration and detonation tests(EN12874:2001)

Range of Application (Marking)		Requirement for test mixture	
Explosion group	MESG of mixture (mm)	Gas type	Gas in air by volume(%)
IIA	> 0.90	Propane	4.2 ± 0.2
IIB1	≥0.85	Ethylene	5.0 ± 0.1
IIB2	≥0.75		5.5 ± 0.1
IIB3	≥0.65		6.5 ± 0.5
IIB	≥0.50	Hydorgen	45.0 ± 0.5
IIC	< 0.50	Hydorgen	28.5.2 ± 2.0

MESG : Maximum Experimental Safe Gap

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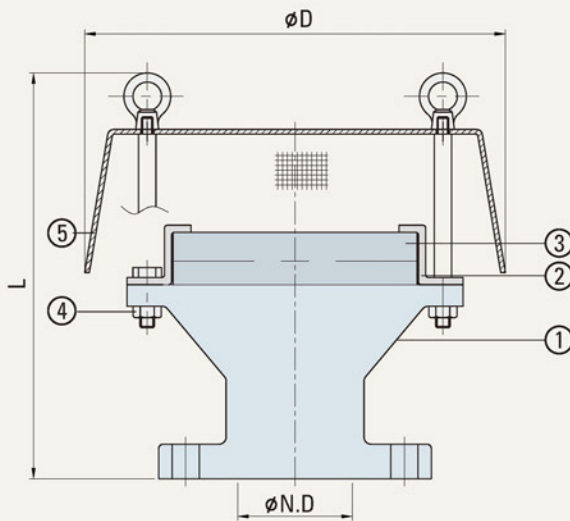
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**EXPLOSION PROOF
END-LINE FLAME ARRESTER**

**PROSAVE
FLAME ARRESTER**

FE TYPE



Dimension Table

Unit = mm

TYPE	FE-1	FE-1 1/2	FE-2	FE-3	FE-4	FE-5	FE-6	FE-8	FE-10	FE-12
SIZE	25A	40A	50A	80A	100A	125A	150A	200A	250A	300A
N.D	25	40	50	80	100	125	150	200	250	300
øD	250	250	250	293	350	379	445	540	635	774
L	245	245	245	262	315	340	393	437	492	520

Materials of Construction

NO	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	ELEMENT RING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
4	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
5	HOOD	SPCC	SPCC	SPCC

* Other material is available on special request by customers

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Unstable and Stable Detonation Flame Arrester

FLAME ARRESTER

DFA TYPE



Benefits

- Type Approved by IMO and ATEX (European Directive 94/9/EC)
- Meet the latest international rule requirement of API 2000 and ISO 16852:2016
- Protection against explosion and deflagration flame
- High flow capacity and minimum pressure loss
- Available bi-directional flow and flame passage
- Available vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance chemical resistance material

General

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are present.

The model FA in-line flame arrester is designed, manufactured and tested according to API 2000 and ISO 16852:2016.

Body material of arrester is available for nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance.

The material of element is available for stainless steel grade 316L or special alloy steel for chemical resistance.

The flame element is constructed with crimped ribbon metal.

Explosion Group : IIA, IIB3, IIC

Type : Unstable and Stable Detonation

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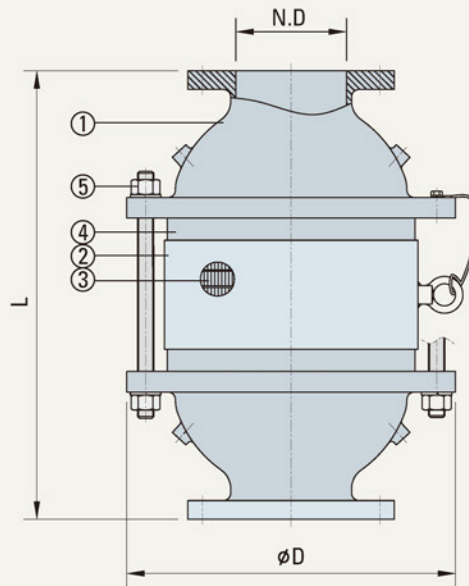
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Detonation Flame Arrester

PROSAVE FLAME ARRESTER

DFA TYPE



Dimension Table

Unit = mm

TYPE	DFA-1	DFA-2	DFA-3	DFA-4	DFA-6	DFA-8	DFA-10	DFA-12	DFA-14	DFA-16	DFA-18	DFA-20	DFA-24
SIZE	25A	50A	80A	100A	150A	200A	250A	300A	350A	400A	450A	500A	600A
ND	25	50	80	100	150	200	250	300	350	400	450	500	600
øD	270	270	300	330	446	553	670	770	895	1015	1130	1230	1745
L	464	464	514	528	608	764	800	985	1200	1400	1500	1600	2054

Materials of Construction

NO	DESCRIPTION	SPEC.1	SPEC.2	SPEC.3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	HOUSING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
4	SPACER	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
5	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316

* Other material is available on special request by customers.

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**In-line Liquid
Detonation Flame Arrester
for filling lines - external installation**

PROSAVE FLAME ARRESTER

LDFA TYPE

Benefits

- Meet the latest international rule requirement of ISO 16852 : 2016.
- Protection against detonation and deflagration line
- High flow capacity and minimum pressure loss
- Available uni-directional flow and flame passage
- Available Horizontal installation
- Simple construction
- High performance chemical resistant material

General

LDFA liquid detonation flame arrester was developed for storage tank filling lines that are not continuously filled with product and sometimes contain a combustible mixture.

If the explosive atmosphere is ignited, the device prevents the combustion from traveling into the tank.

When a highly accelerated pipe deflagration or detonation occurs, the combustion pressure and flame propagation speed is first substantially reduced by the design and converted into a low-energy deflagration that is then stopped by the remaining immersion liquid.

Explosion Group : IIA to IIB3

Type : Stable Detonation

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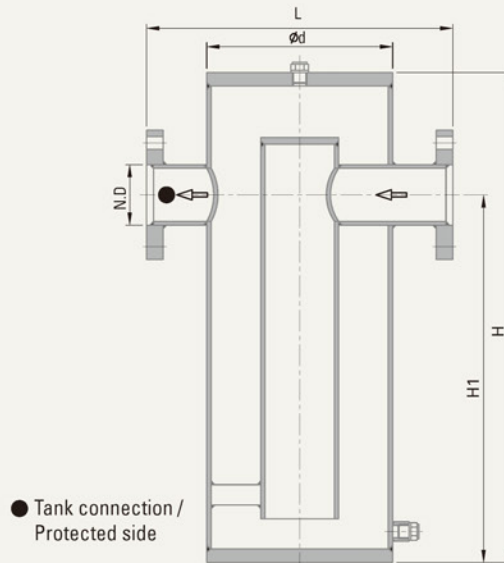
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Detonation Flame Arrester

PROSAVE FLAME ARRESTER

LDFA TYPE



Dimension Table

	Unit = mm						
TYPE	LDFA-2	LDFA-3	LDFA-4	LDFA-6	LDFA-8	LDFA-10	LDFA-12
SIZE	50A	80A	100A	150A	200A	250A	300A
ND	50	80	100	150	200	250	300
ød	219	273	324	457	508	610	710
L	350	450	500	600	700	850	1000
H1	420	540	595	915	1100	1325	1480
H	565	720	800	1265	1520	1830	2050

Materials of Construction

DESCRIPTION	SPEC.1	SPEC.2	SPEC.3
BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

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**In-line Liquid
Detonation Flame Arrester
for filling lines - Internal installation**

PROSAVE FLAME ARRESTER

LDFA-E TYPE

Benefits

- Meet the latest international rule requirement of ISO 16852 : 2016.
- Protection against detonation and deflagration line
- High flow capacity and minimum pressure loss
- Available uni-directional flow and flame passage
- Available vertical installation
- Simple construction
- High performance chemical resistant material
- Deliverable with different outlets

General

LDFA- E liquid detonation flame arrester was developed for storage tank filling lines that are not continuously filled with product and sometimes contain a combustible mixture.

The device is installed inside the tank at the end of the line.

If the explosive atmosphere is ignited, the device prevents the combustion from being transferred into the tank.

When a highly accelerated pipe deflagration or detonation occurs, the combustion pressure and flame propagation speed is first substantially reduced by the design and converted into a low-energy deflagration that is then stopped by the remaining immersion liquid.

Explosion Group : IIA to IIB3

Type : Stable Detonation

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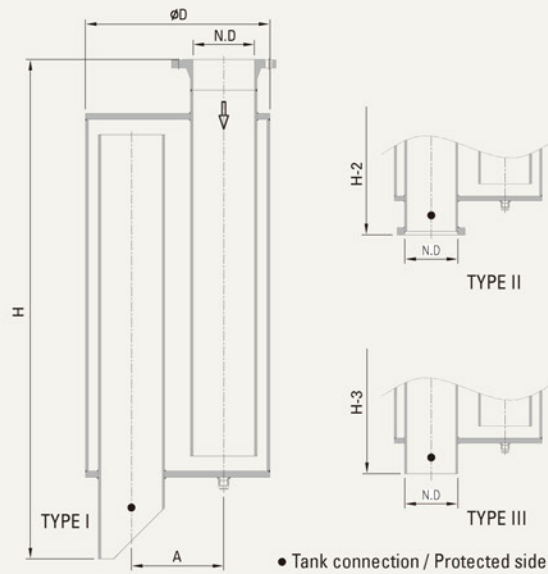
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Detonation Flame Arrester

PROSAVE FLAME ARRESTER

LDFA-E TYPE



Dimension Table

Unit = mm

TYPE	LDFA-E-2	LDFA-E-2.5	LDFA-E-3	LDFA-E-4	LDFA-E-5	LDFA-E-6	LDFA-E-8	LDFA-E-10
SIZE	50A	65A	80A	100A	125A	150A	200A	250A
ND	50	65	80	100	125	150	200	250
ØD	168	220	245	325	356	500	600	700
A	65	95	105	135	155	200	250	300
H	925	1050	1145	1270	1380	1580	1880	2300
H-2	745	870	975	1102	1205	1405	1712	2068
H-3	700	825	925	1050	1150	1350	1650	2000

Materials of Construction

DESCRIPTION	SPEC.1	SPEC.2	SPEC.3
BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

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**In-line Liquid
Detonation Flame Arrester**
for filling and drain lines
- external installation

FLAME ARRESTER

LDFA-I TYPE

Benefits

- Meet the latest international rule requirement of ISO 16852 : 2016
- Protection against detonation and deflagration line
- High flow capacity and minimum pressure loss
- Available bi-directional flow and flame passage
- Available horizontal installation
- High performance chemical resistant material

General

LDFA- I liquid detonation flame arrester was developed for storage tank filling lines that are not continuously filled with product and sometimes contain a combustible mixture.

The integrated flame arrester unit additionally prevents the liquid in which the lines are immersed from being siphoned off while the storage tank is being drained.

If the explosive atmosphere is ignited, the device prevents the combustion from traveling into the tank.

When a highly accelerated pipe deflagration or detonation occurs, the combustion pressure and flame propagation speed is first substantially reduced by the design and converted into a low-energy deflagration that is then stopped by the remaining immersion liquid.

Explosion Group : IIA to IIB3

Type : Stable Detonation

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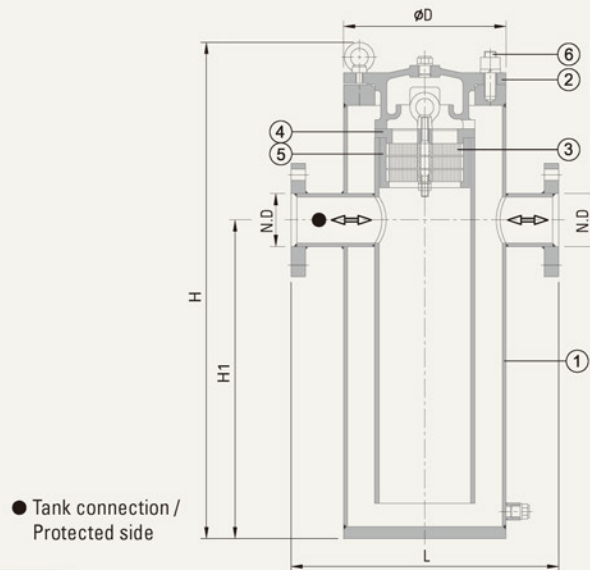
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Detonation Flame Arrester

FLAME ARRESTER

LDFA-I TYPE



Dimension Table

Unit = mm

TYPE	LDFA-E-2	LDFA-E-2.5	LDFA-E-3	LDFA-E-4	LDFA-E-5	LDFA-E-6	LDFA-E-8	LDFA-E-10
SIZE	50A	65A	80A	100A	125A	150A	200A	250A
ND	50	65	80	100	125	150	200	250
ØD	219	273	273	324	457	457	508	610
L	350	446	450	500	600	600	700	900
H1	415	535	535	600	915	915	1090	1300
H	605	831	831	936	1340	1340	1520	1750

Materials of Construction

NO	DESCRIPTION	SPEC.1	SPEC.2	SPEC.3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	COVER	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
4	ELEMENT BRACKET	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
5	ELEMENT HOUSING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316

* Other material is available on special request by customers.

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