www.prosave.co.kr

prosave.co.kr

Catalogue Download

Top Reliability, Smart Design,
Valuable Product and Better Life

STORAGE TANK VENTING DEVICES

PRODUCTS

Detonation Flame Arresters
Deflagration Flame Arresters
In-line Liquid Detonation Flame Arresters
Breather Valve (Pressure/Vacuum Relief Valve)
Breather Valve With Flame Arrester
Pressure Relief Valve
Vacuum Relief Valve
Pilot-operated Pressure/Vacuum Relief Valve
Emergency Vent Cover
Gauge hatch cover

PROSAVE

Detonation Flame Arrester

DFA/UDFA/EDFA TYPE

ATEX

ATEX and IMO Approved
Explosion group : IIA, IIB3, IIC

Introduction

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are presented.
The model DFA / UDFA /EDFA in-line flame arrester is designed, manufactured and tested according to API 2000 and ISO 16852, IMO MSC Circ 677.
Body material of arrester is available of nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance.
The material of element is available of stainless steel grade 316L or special alloy steel for chemical resistance.
The flame element is constructed with crimped ribbon metal.
DNV MED and ATEX Approved with stable detonation flame arrester(DFA, EDFA) and unstable detonation flame arrester(DFA, UDFA)
Model DFA, UDFA : concentric type / Model EDFA : Eccentric type

Specification of gas/air-mixtures for deflagration and detonation tests(ISO 16852:2016)

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

Benefits

- Type Approved by IMO and ATEX (European Directive 94/9/EC)
- To meet the latest international rule requirement of API 2000, ISO 16852 and IMO MSC Circ 677
- Protection against explosion and deflagration flame
- High flow capacity and minimum pressure loss
- Available of bi-directional flow and flame passage
- Available of vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance chemical resistance material

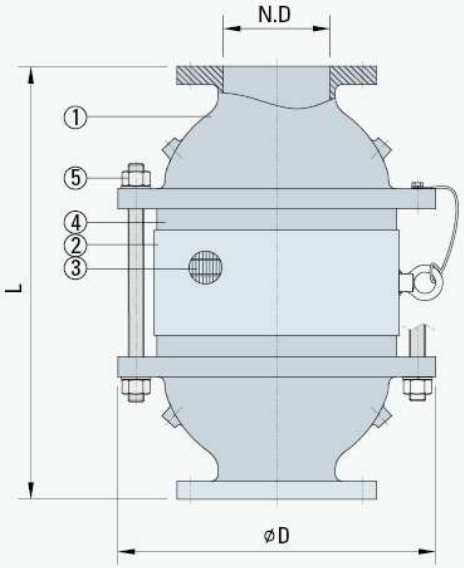
Unstable Detonation Flame Arrester

Concentric Design with Bi-Directional.

DFA/UDFA TYPE

ATEX

Explosion group : IIA, IIB3



Dimension Table

Unit = mm

Explosion group : IIA

TYPE	DFA-2	DFA-3	DFA-4	UDFA-6	UDFA-8	UDFA-10	UDFA-12
SIZE	50A	80A	100A	150A	200A	250A	300A
ND	50	80	100	150	200	250	300
øD	270	270	330	446	553	670	770
L	464	484	528	718	808	954	1050

Explosion group : IIB3

DFA-2	DFA-3	DFA-4	UDFA-6	UDFA-8	UDFA-10	UDFA-12
50A	80A	100A	150A	200A	250A	300A
50	80	100	150	200	250	300
270	300	330	446	553	670	770
486	506	550	762	852	998	1094

* Other size are available on request.

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.

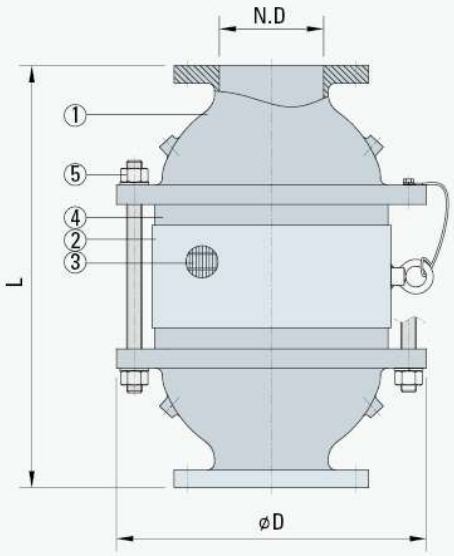
Stable Detonation Flame Arrester

Concentric Design with Bi-Directional.

DFA TYPE

ATEX

Explosion group : IIA, IIB3, IIC



Dimension Table

Unit = mm

Explosion group : IIA, IIB3

TYPE	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	50A	80A	100A	150A	200A	250A	300A	350A	400A	450A	500A	600A
ND	50	80	100	150	200	250	300	350	400	450	500	600
øD	270	270	330	446	548	660	770	872	992	1103	1226	1660
L	464	484	528	606	704	850	940	1096	1220	1316	1446	2049

Explosion group : IIC

DFA-2	DFA-3	DFA-4	DFA-6	DFA-8	DFA-10	DFA-12
50A	80A	100A	150A	200A	250A	300A
50	80	100	150	200	250	300
270	270	330	446	548	660	770
464	484	528	696	786	932	1028

* Other size are available on request.

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.

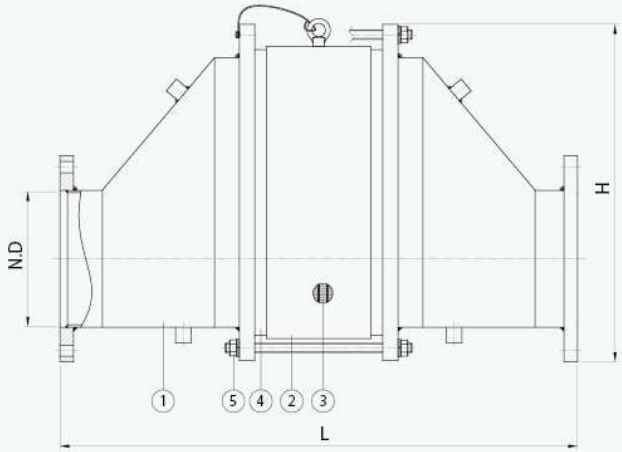
Stable Detonation Flame Arrester

Eccentric type Design with Bi-Directional

EDFA TYPE

ATEX

Explosion group : IIB3



Dimension Table

Unit = mm

Explosion group : IIB3

TYPE	EDFA-14	DFA-16	DFA-18	DFA-20	DFA-24
SIZE	350A	400A	450A	500A	600A
ND	350	400	450	500	600
H	876	993	1103	1226	1660
L	1342	1412	1575	1752	2110

* Other size are available on request.

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.

Deflagration Flame Arrester

FA TYPE

ATEX

ATEX and IMO Approved
Explosion group : IIA, IIB3, IIC

Introduction

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are presented.
The model FA in-line flame arrester is designed, manufactured and tested according to API 2000, ISO 16852, IMO MSC Circ 677.
Body material of arrester is available of nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance. The material of element is available of stainless steel grade 316L or special alloy steel for chemical resistance. The flame element is constructed with crimped ribbon metal.

Description of Protective System:

The in-line, bi-directional, deflagration flame arresters types FA-02; FA-03; FA-04; FA-06; FA-08; FA-10; FA-12 are designed to prevent a flame transmission in case of deflagration of flammable gas - and/or vapour/air mixtures of the explosion group IIA, IIB, IIC at a maximum operating pressure po which is defined below and at maximum operational temperature of the flame arrester To = +60°C.
Flame arresters are consists of flame arrester element tight between two flanges.
Approved Gas Group : IIA, IIB3, IIC.

Specification of gas/air-mixtures for deflagration and detonation tests(ISO 16852:2016)

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

Benefits

- Type Approved by IMO and ATEX (European Directive 94/9/EC)
- To meet the latest international rule requirement of API 2000, ISO 16852 : 2016 and IMO MSC Circ 677
- Protection against explosion and deflagration flame
- High flow capacity and minimum pressure loss
- Available of bi-directional flow and flame passage
- Available of vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance chemical resistance material

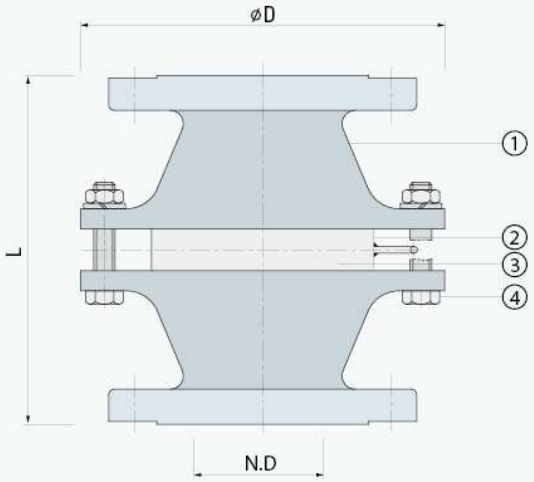
Deflagration Flame Arrester

Concentric Design with Bi-Directional

FA TYPE

ATEX

Explosion group : IIA, IIB3, IIC



Dimension Table

Unit = mm

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

* Other size are available on request.

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.

End-Line Deflagration Flame Arrester

FE TYPE Ex ATEX

ATEX Approved

General

The flame arrester is designed to prevent flame transmission when flammable gas/air- or vapor/air-mixtures are presented.
The model end-line flame arrester is designed, manufactured and tested according to API 2000 and ISO 16852:2016.
Body material of arrester is available of nodular cast iron, cast steel, stainless steel grade 304, 316, 316L and special alloy steel for chemical resistance.
The material of element is available of stainless steel grade 316L or special alloy steel for chemical resistance.
The flame element is constructed with crimped ribbon metal.
Approved Gas Group : IIA, IIB3, IIC.

Specification of gas/air-mixtures for deflagration and detonation tests(ISO 16852:2016)

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

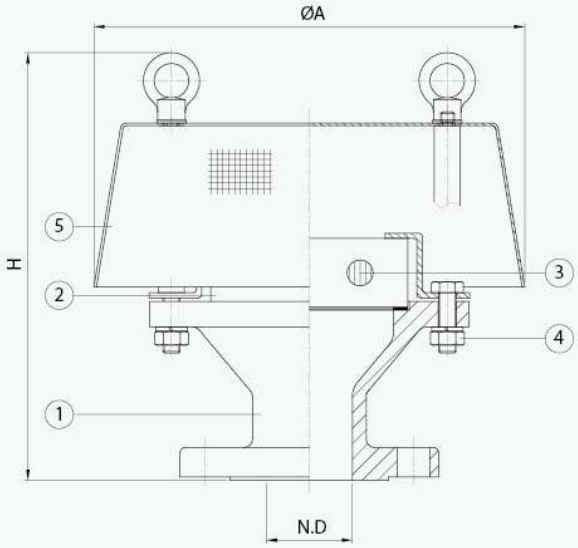
MESG : Maximum Experimental Safe Gap

Benefits

- To meet the latest international rule requirement of API 2000 and ISO 16852:2016
- Protection against explosion and deflagration flame
- Available of vertical and horizontal installation
- Very easy maintenance for quick cleaning
- High performance with chemical resistance material

End-Line Deflagration Flame Arrester

FE TYPE Ex ATEX



Dimension Table

Unit = mm

TYPE	FE-2	FE-3	FE-4	FE-6	FE-8	FE-10	FE-12
SIZE	50A	80A	100A	150A	200A	250A	300A
N.D	50	80	100	150	200	250	300
ØA	275	293	350	450	539	660	773
H	248	285	305	385	416	430	520

* Other size are available on request.

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.

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

LDFA TYPE

General

LDFA liquid detonation flame arrester is developed for storage tank filling lines that are not continuosly 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

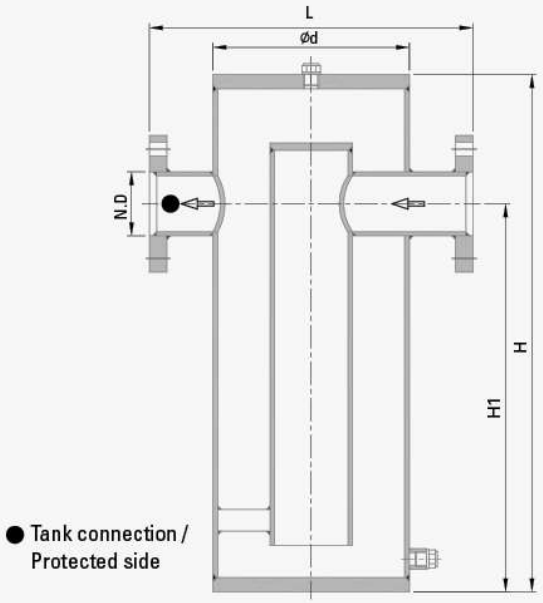
Benefits

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

In-line Liquid Detonation Flame Arrester

for filling lines - external installation

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

* Other size are available on request.

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.

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

LDFA-E TYPE

General

LDFA- E liquid detonation flame arrester is developed for storage tank filling lines that are not continuosly 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

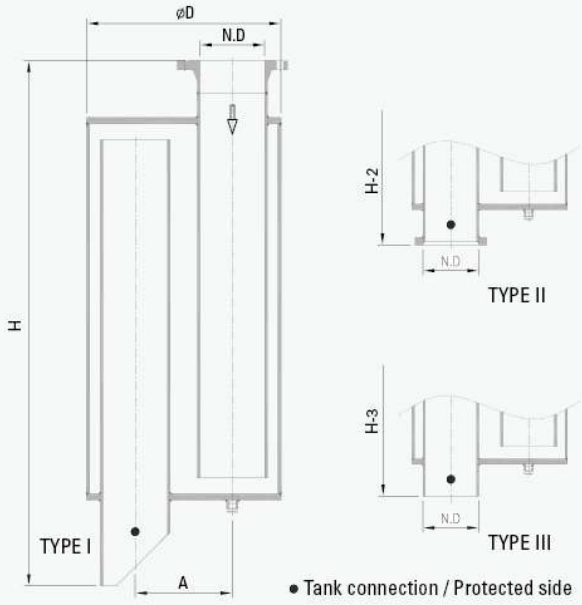
Benefits

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

In-line Liquid Detonation Flame Arrester

for filling lines - external installation

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

* Other size are available on request.

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.

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

LDFA-I TYPE

General

LDFA- I liquid detonation flame arrester is developed for storage tank filling lines that are not continuosly 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

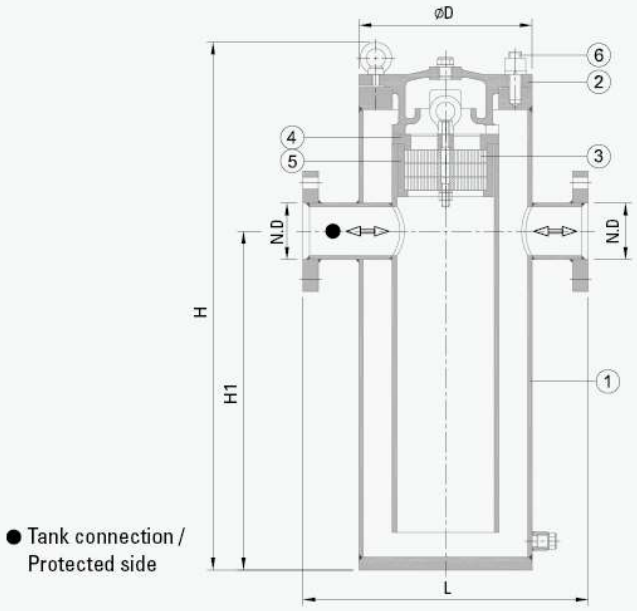
Benefits

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

In-line Liquid Detonation Flame Arrester

for filling lines - external installation

LDFA-I TYPE



Dimension Table

Unit = mm

TYPE	LDFA-I-2	LDFA-I-2.5	LDFA-I-3	LDFA-I-4	LDFA-I-5	LDFA-I-6	LDFA-I-8	LDFA-I-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

* Other size are available on request.

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.

Breather Valve

Pressure Vacuum Relief Valve, Vent to Atmosphere

BV/BS TYPE

Introduction

The model BV/BS pressure vacuum relief valves is designed, manufactured and tested according to the API 2000 standard.

The model BV/BS pressure vacuum relief valves is used to relieve excess pressure and vacuum that has been developed in a tank.

To avoid product loss, BV/BS pressure vacuum relief valves are recommended to use on atmospheric storage tank.

The set pressure and relieving pressure shall be consistent with the requirements of the standard according to which the tank is designed and fabricated. The model BV/BS can be manufactured the range of pressure and vacuum setting form ±22 mm W.C to ±8000 mm W.C.

The model BV type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The model BS type is spring-loaded type over weight loaded type.

The materials for BV/BS shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available of Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- To meet API leak test requirement
- No need of inside maintenance
- Available of outside inspection, cleaning and maintenance without disassembling

Breather Valve

Pressure Vacuum Relief Valve, In-Line Type

BP/BPS TYPE

Introduction

The model BP/BPS pressure vacuum relief valves is designed, manufactured and tested according to the API 2000 standard.

The model BP/BPS pressure vacuum relief valves is used to relieve excess pressure and vacuum that has been developed in a tank.

To avoid product loss, BP/BPS pressure vacuum relief valves are recommended to use on atmospheric storage tank.

The set pressure and relieving pressure shall be consistent with the requirements of the standard according to which the tank is designed and fabricated. The model BP/BPS can be manufactured the range of pressure and vacuum setting form ±22 mm W.C to ±8000 mm W.C.

The model BP type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The model BPS type is spring-loaded type over weight loaded type.

The materials for BP/BPS shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available of Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- To meet API leak test requirement
- No need of inside maintenance
- Available of outside inspection, cleaning and maintenance without disassembling

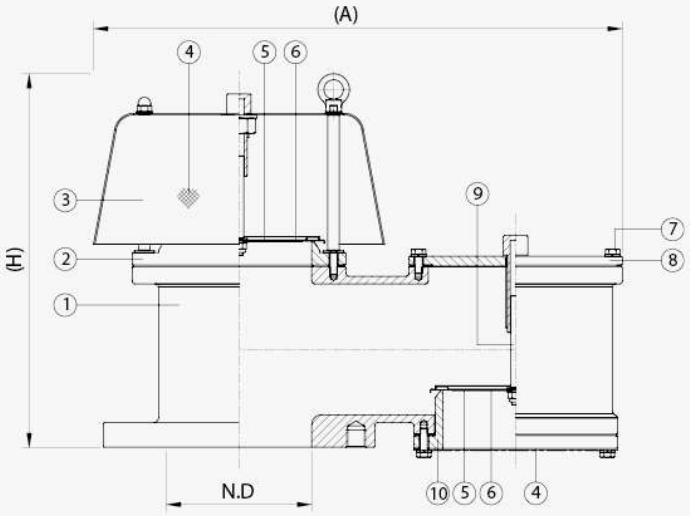
Breather Valve

Pressure Vacuum Relief Valve, Vent to Atmosphere

BV/BS TYPE

BV/BS Weight Loaded Type

For high pressure setting, BV/BS Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	BV/BS-2	BV/BS-3	BV/BS-4	BV/BS-6	BV/BS-8	BV/BS-10	BV/BS-12
SIZE	50A	80 A	100 A	150A	200A	250A	300A
N.D	50	80	100	150	200	250	250
A	173	183	430	580	700	840	950
H	303	335	340	480	580	710	800
W.T(kg)	16	20	27	46	85	125	150

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	BURD/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
5	PRESSURE/VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	PRESSURE/VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
7	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
8	VACUUM COVER	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
9	PRESSURE/VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
10	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

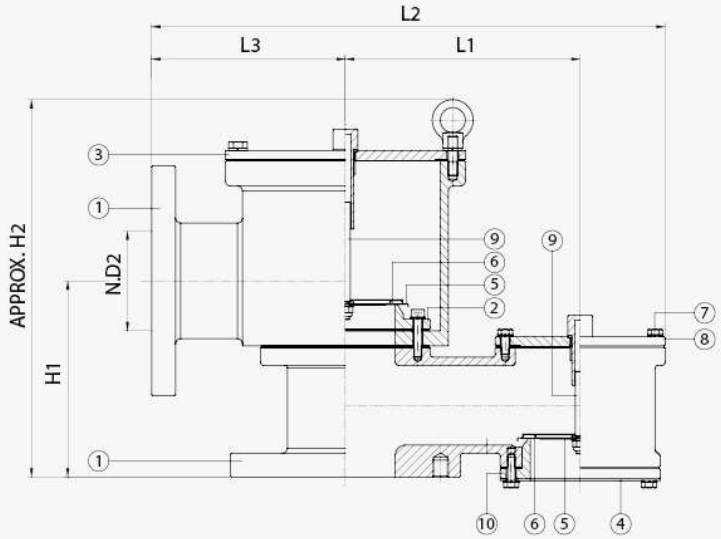
Breather Valve

Pressure Vacuum Relief Valve, In-Line Type

BP/BPS TYPE

BV/BS Weight Loaded Type

For high pressure setting, BV/BS Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	BP-2x2	BP-2x3	BP-3x3	BP-3x4	BP-4x4	BP-4x6	BP-6x6	BP-6x8	BP-8x8	BP-8x10	BP-10x10	BP-10x12	BP-12x12	BP-14x14	BP-16x16
N.D 1	50	50	80	80	100	100	150	150	200	200	250	250	300	350	400
N.D 2	50	80	80	100	100	150	150	200	200	250	250	300	300	350	400
H1	127	143	175	187	196	222	278	308	314	339	372	397	403	614	655
H2	268	305	339	368	378	515	572	539	538	593	626	676	682	929	1006
L1	170	170	205	205	235	235	285	285	345	353	400	407	465	532	557
L2	376	412	460	474	514	516	620	660	780	785	865	895	975	1113	1190
L3	144	180	180	194	194	196	196	265	265	300	300	320	320	360	390

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	BURD/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
5	PRESSURE/VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	PRESSURE/VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
7	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
8	VACUUM COVER	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
9	PRESSURE/VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
10	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

Breather Valve with Flame Arrester

Pressure Vacuum Relief Valve, Vent to Atmosphere

BVF TYPE

ATEX

ATEX Approved Explosion Proof
End-Of-Line Flame Arrester
Explosion group : IIA, IIB3

Introduction

Flame arrester combined with model BVF pressure vacuum relief valve manufactured and tested according to API 2000 / ISO 16852:2016 standard.
The model BVF pressure vacuum relief valves used to relieve excess pressure and vacuum that has developed in a tank.
To avoid product loss, pressure vacuum relief valves are recommended for use on atmospheric storage tank.
In the event of external ignition, the flame arrester prevents flame transmission from entering the piping systems and tanks.
The model BVF type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The materials for BVF shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available in Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- Meet API leak test requirement
- No need inside maintenance
- Available outside inspection, cleaning and maintenance without disassembling
- ISO 16852:2016 7.3.2.1 End-of-line flame arrester test compliance Protects against atmospheric deflagration

Breather Valve with Flame Arrester

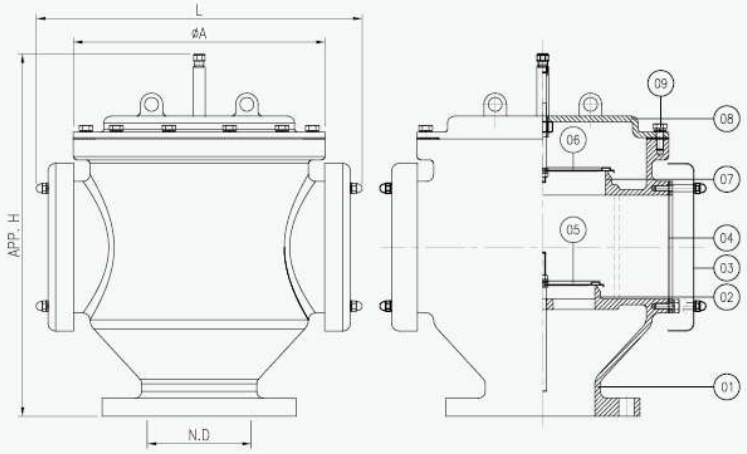
Pressure Vacuum Relief Valve, Vent to Atmosphere

BVF TYPE

ATEX

BVF Weight Loaded Type

For high pressure setting, BSF Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	BVF-2	BVF-3	BVF-4	BVF-6	BVF-8	BVF-10	BVF-12
ND	50	80	100	150	200	250	300
H	359	390	430	523	673	699	833
øA	205	235	255	363	429	518	614
L	320	360	376	470	547	633	729

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3	SPEC. 4
1	BODY	Aluminum Steel	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Carbon Steel	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
4	FLAME SCREEN	Stainless Steel 316/316L	Stainless Steel 316/316L	Stainless Steel 316/316L	Stainless Steel 316/316L
5	PRESSURE DISC / DIAPHRAGM	Stainless Steel 304 / FEP	Stainless Steel 304 / FEP	Stainless Steel 304 / FEP	Stainless Steel 316/316L / FEP
6	VACUUM DISC / DIAPHRAGM	Stainless Steel 304 / FEP	Stainless Steel 304 / FEP	Stainless Steel 304 / FEP	Stainless Steel 316/316L / FEP
7	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
8	COVER	Aluminum Steel	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
9	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

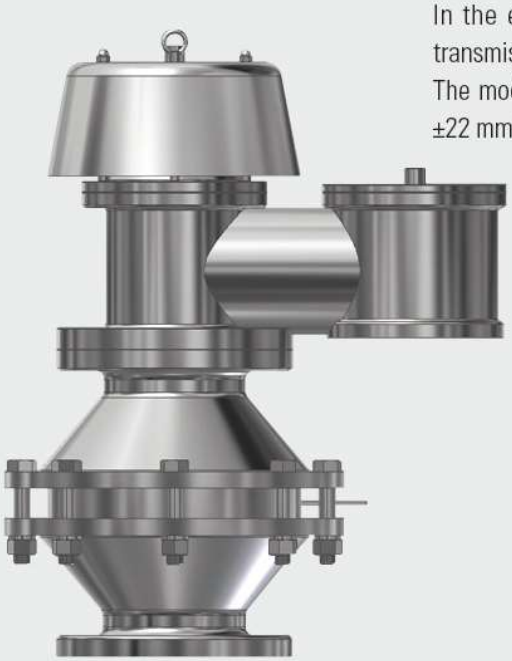
* Other material is available on special request by customers.

Breather Valve with Flame Arrester

Pressure Vacuum Relief Valve, Vent to Atmosphere

BVFA/BSFA TYPE

ATEX Approved Explosion Proof
End-Of-Line Flame Arrester
Explosion group : IIA, IIB3



Introduction

Flame arrester combined with model BVFA/BSFA pressure vacuum relief valve manufactured and tested according to API 2000 / ISO 16852:2016 standard.

The model BVFA/BSFA pressure vacuum relief valves used to relieve excess pressure and vacuum that has developed in a tank.

To avoid product loss, pressure vacuum relief valves are recommended for use on atmospheric storage tank.

In the event of external ignition, the flame arrester prevents flame transmission from entering the piping systems and tanks.

The model BVFA/BSFA type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The materials for BVFA/BSFA shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available in Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- Meet API leak test requirement
- No need inside maintenance
- Available outside inspection, cleaning and maintenance without disassembling
- ISO 16852:2016 7.3.2.1 End-of-line flame arrester test compliance Protects against atmospheric deflagration

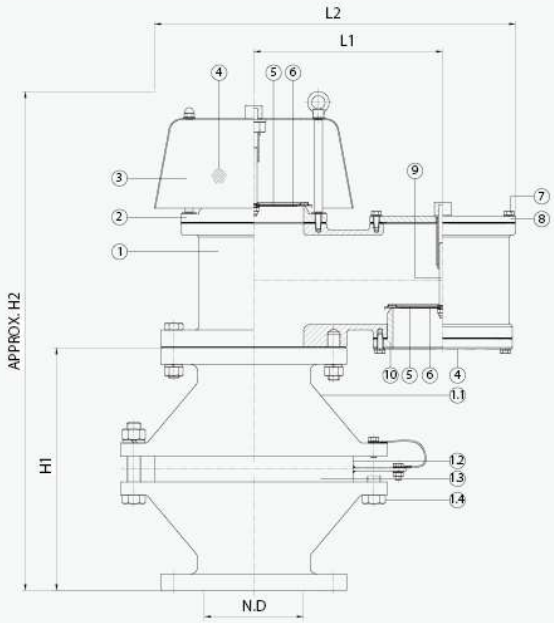
Breather Valve with Flame Arrester

Pressure Vacuum Relief Valve, Vent to Atmosphere

BVFA/BSFA TYPE

BVFA Weight Loaded Type

For high pressure setting, BSFA Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	BVFA-2	BVFA-3	BVFA-4	BVFA-6	BVFA-8	BVFA-10	BVFA-12
ND	50	80	100	150	200	250	300
L1	170	205	235	285	345	400	465
L2	322	385	450	545	660	765	880
H1	241	260	281	367	429	477	533
H2	475	537	583	754	834	960	1019

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 4
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	BURO/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
5	PRESSURE/VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	PRESSURE/VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
7	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
8	VACUUM COVER	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
9	PRESSURE/VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
10	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
1.1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
1.2	ELEMENT RING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
1.3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
1.4	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316

* Other material is available on special request by customers.

Breather Valve with Flame Arrester

Pressure Vacuum Relief Valve, In-Line Type

BPFA/BPSFA TYPE

ATEX Approved Explosion Proof
End-Of-Line Flame Arrester
Explosion group : IIA, IIB3

Introduction

Flame arrester combined with model BPFA/BPSFA pressure vacuum relief valve manufactured and tested according to API 2000 / ISO 16852:2016 standard.

The model BPFA/BPSFA pressure vacuum relief valves used to relieve excess pressure and vacuum that has developed in a tank.

To avoid product loss, pressure vacuum relief valves are recommended for use on atmospheric storage tank.

In the event of external ignition, the flame arrester prevents flame transmission from entering the piping systems and tanks.

The model BPFA/BPSFA type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The materials for BPFA/BPSFA shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available in Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- Meet API leak test requirement
- No need inside maintenance
- Available outside inspection, cleaning and maintenance without disassembling
- ISO 16852:2016 7.3.2.1 End-of-line flame arrester test compliance Protects against atmospheric deflagration

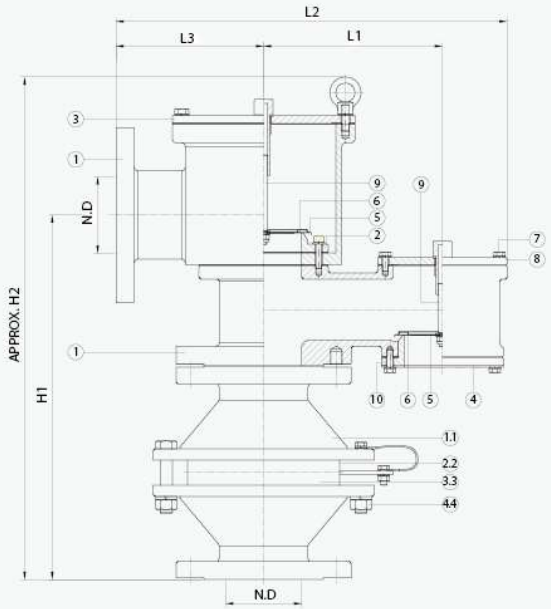
Breather Valve with Flame Arrester

Pressure Vacuum Relief Valve, In-Line Type

BPFA/BPSFA TYPE

BPFA Weight Loaded Type

For high pressure setting, BPSFA Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	BPFA-2	BPFA-3	BPFA-4	BPFA-6	BPFA-8	BPFA-10	BPFA-12
ND	50	80	100	150	200	250	300
L1	170	205	235	285	345	400	465
L2	376	460	514	620	780	865	975
L3	144	180	194	196	265	300	320
H1	368	435	477	645	746	849	936
H2	509	599	659	859	993	859	993

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 4
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	BURO/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
5	PRESSURE/VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	PRESSURE/VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
7	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
8	VACUUM COVER	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
9	PRESSURE/VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
10	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
1.1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2.2	ELEMENT RING	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3.3	ELEMENT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
4.4	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316

* Other material is available on special request by customers.

Pressure Relief Valve, End-line Type

PR/PS TYPE

Introduction

The model PR/PS pressure relief valves is designed, manufactured and tested according to the API 2000 standard.

The model PR/PS pressure relief valves is used to relieve excess pressure that has been developed in a tank. To avoid product loss, PR/PS pressure vacuum relief valves are recommended to use on atmospheric storage tank. The set pressure and relieving pressure shall be consistent with the requirements of the standard according to which the tank is designed and fabricated. The model PR/PS can be manufactured the range of pressure and vacuum setting form ±22 mm W.C to ±8000 mm W.C.

The model PR type is weight-loaded type with minimum setting ±22 mm W.C and maximum setting ±700 mm W.C.

The model PS type is spring-loaded type over weight loaded type.

The materials for PR/PS shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available of Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

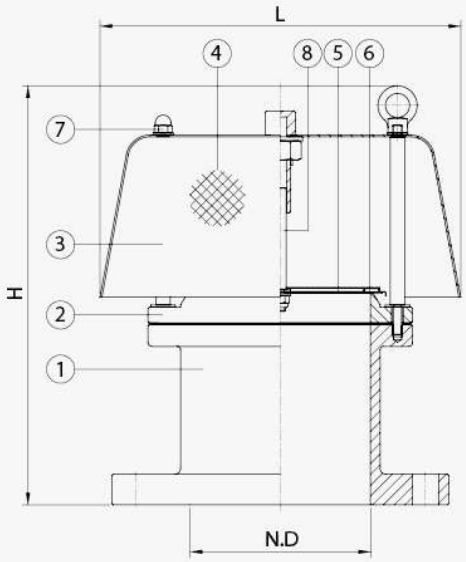
- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- To meet API leak test requirement
- No need of inside maintenance
- Available of outside inspection, cleaning and maintenance without disassembling

Pressure Relief Valve, End-line Type

PR/PS TYPE

PR Weight Loaded Type

For high pressure setting, **PS Type** Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	PR-2	PR-3	PR-4	PR-6	PR-8	PR-10	PR-12
SIZE	50A	80A	100A	150A	200A	250A	300A
N.D	50	80	100	150	200	250	300
L	170	220	260	300	350	440	450
H	232	275	301	386	409	476	484

* Other size are available on request.

Materials of Construction

NO.	DESCRIPTION	SPEC. 1	SPEC. 2	SPEC. 3
1	BODY	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	PRESSURE SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	HOOD	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	BURD/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
5	PRESSURE/VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	PRESSURE/VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
7	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
8	PRESSURE/VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

Vacuum Relief Valve, End-line Type

VR/VS TYPE

Introduction

The model VR/VS vacuum relief valves is designed, manufactured and tested according to the API 2000 standard.

The model VR/VS vacuum relief valves is used to relieve excess vacuum that has been developed in a tank. To avoid product loss, VR/VS vacuum relief valves are recommended to use on atmospheric storage tank.

The set vacuum and relieving pressure shall be consistent with the requirements of the standard according to which the tank is designed and fabricated. The model VR/VS can be manufactured the range of vacuum setting form -22 mm W.C to -8000 mm W.C.

The model VR type is weight-loaded type with minimum setting -22 mm W.C and maximum setting -700 mm W.C.

The model VS type is spring-loaded type over weight loaded type.

The materials for VR/VS shall be selected for the stored-product service temperatures and pressures. Also, the materials should be compatible with the product stored in the tank and with any products formed in the vicinity of the relief valve during filling and discharge. Usually the materials are available of Aluminum, Carbon Steel, Stainless Steel grade 304, 316 and 316L to suit individual requirements.

Benefits

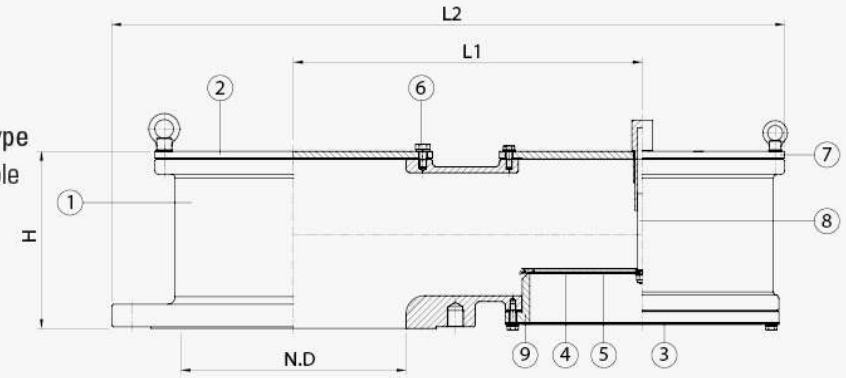
- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- To meet API leak test requirement
- No need of inside maintenance
- Available of outside inspection, cleaning and maintenance without disassembling

Vacuum Relief Valve, End-line Type

VR/VS TYPE

VR Weight Loaded Type

For high pressure setting, VS Type Spring Loaded Valve are available on request.



Dimension Table

Unit = mm

TYPE	VR-2	VR-3	VR-4	VR-6	VR-8	VR-10	VR-12
SIZE	50A	80A	100A	150A	200A	250A	300A
N.D	50	80	100	150	200	250	300
L1	170	205	235	285	345	400	465
L2	307	375	435	535	658	768	898
H	97	132	142	201	207	242	248

* Other size are available on request.

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	BURD/BUG SCREEN	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
4	VACUUM DISC	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
5	VACUUM DIAPHRAGM	TEFLON	TEFLON	TEFLON
6	BOLT/NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
7	COVER	Stainless Steel	Stainless Steel 304	Stainless Steel 316/316L
8	VACUUM STEM	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
9	VACUUM SEAT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

Pilot-operated Pressure/Vacuum Relief Valve

General

Pressure and/or vacuum relief valves are used for dangerous oil, gas or petrochemical storage tanks and other process vessels or systems to prevent structural damage due to excessive pressure or vacuum in. Pilot-operated pressure/vacuum relief valves is performed best atapplications, which is requried high amount of backpressure or fluctuating backpressure.

- Opting for modulating pilots allows the piston to lift only as high as needed, venting off just enough pressure to prevent cycling (a common side effect of backpressure that can cause undue wear to valve parts).

Pilot operation is also recommended for equipments which low accumulation rates are required or when the set pressure level needs to be close to the operating pressure level.

- As pressure increases, the pilot maintains its seal tightly, allowing reliable operation closer to the set point for pack line without product leakage.

- Pilot-operated pressure/vacuum relief valves can work at an operating pressure of up to 98% of set pressure.

Although their initial investment cost tends to be higher, pilot-operated pressure/vacuum relief valves are much smaller than their spring-loaded counterparts, making them easier to install, maintain, and repair.

Features

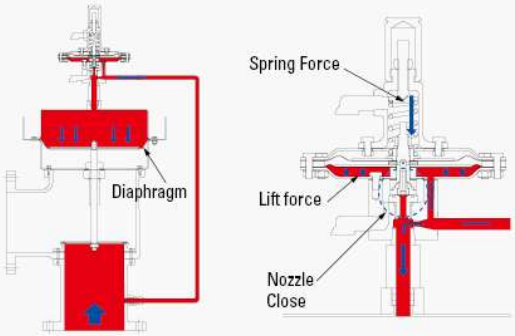
PILOT OPERATED	• Ease precision settings
	• Only the pilot needs to be set
	• Lower profile and weight than spring operated models for high settings
	• Remote pilot sensing option allows the pilot to sense the true system pressure
	• Remote or manual blowdown available
EXTRA TIGHT SEAL	• Main valve remains tight to set pressure
FULL FLOW	• Full open at 10% overpressure
SNAP-ACTION OR MODULATING ACTION	• Modulating action conserves product since valve opening is proportional to overpressure.
	• Noise is reduced since the valve only opens fully when required.
SOFT SEATED	• Soft seats seal tight to conserve product and minimize valve wear which improves reliability
TOP ENTRY	• Reducing maintenance costs since the valve can be completely serviced without removal from its mounting

Technical details

- Size: 2" (DN 50) through 12" (DN 300)
- Material: Standard body materials are carbon steel, stainless steel, aluminum
- Pressure: from 2.0 inchW.C to 15 psig
- Vacuum: from 7.0 inchW.C to 12 psig
- Temperature: Supply Media Temperature range from -160°C to 150°C
- ISO 9001 Certified manufacturing process

Valve Close Condition

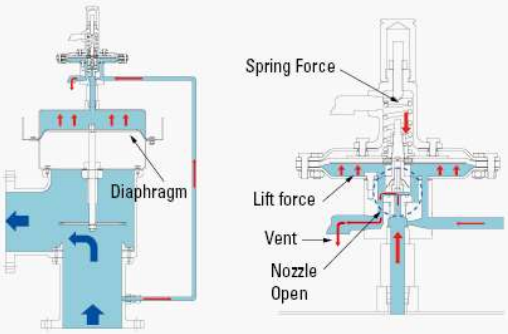
Set Pressure > Pipe Line Pressure
Spring Force > Lift Force



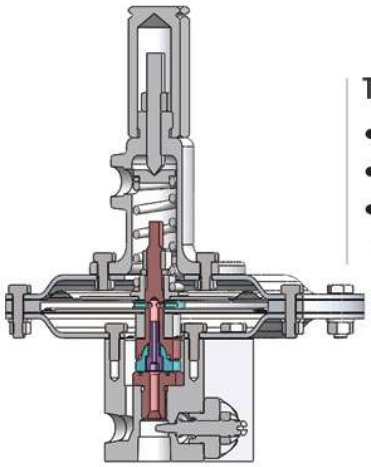
1) When the pipe pressure is smaller than the setting pressure of the valve.
2) Since the lift force is smaller than the setting spring force.
3) The valve disc will be closed by applying pressure to the upper dome.

Valve Open Condition

Set pressure < Pipe Line Pressure
Spring Force < Lift Force



1) When the pipe pressure is larger than the setting pressure of the valve.
2) Since the lift force is larger than the setting spring force.
3) The valve disc will be opened by the pilot nozzle to vent.



Technical details

- Pressure relief
- Vacuum relief
- Combination pressure and vacuum relief

Applications

- Oil & Gas - Upstream (E & P), Midstream(LNG) and downstream(refining)
- Oil & Gas pipeline & compression stations(Oil & Gas)
- Chemical & petrochemical production
- Conventional power plant
- Cryogenic storage tanks
- LNG/LPG ships

Emergency Vent Cover

EV/EH TYPE

Introduction

This vents are designed to provide emergency pressure relief for storage tanks when exposed to overpressures that are not handled by standard tank vents.

These vents provides the capacity to meet API standard 2000 for emergency venting due to fire exposure when properly sized.

These covers also provide quick easy access for tank inspection and maintenance.

EV

EH

Benefits

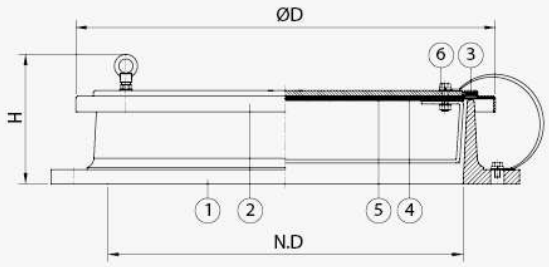
- Designed according to the API 2000 standard.
- Reliable operations reduces vapor losses
- Suitable and compact design ensures long-term maintenance free life cycle
- Full lifting and high flow capacity
- To meet API leak test requirement
- No need of inside maintenance
- Available of outside inspection, cleaning and maintenance without disassembling

Emergency Vent Cover

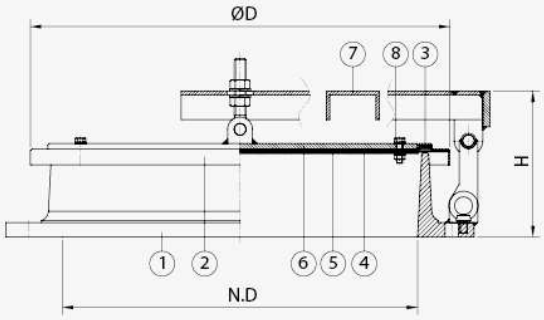
EV/EH TYPE

EV / EH Weight Loaded Type

For high pressure setting, ES Type
Spring Loaded Valve are available on request.



EV (Non-Hinged Type)



EH (Hinged Type)

Dimension Table

Unit = mm

EV (Non-Hinged Type)

TYPE	EV-16	EV-20	EV-24	EV-28	EV-32	EV-36
N.D	400	500	600	700	800	600
øD	491	591	691	791	891	991
H	(131)	(131)	(131)	(199)	(199)	(199)

EH (Hinged Type)

TYPE	EH-16	EH-20	EH-24	EH-28	EH-32	EH-36
N.D	400	500	600	700	800	600
øD	491	591	691	791	891	991
H	(213)	(213)	(213)	(213)	(213)	(213)

* Other size are available on request.

Materials of Construction

EV (Non-Hinged Type)

No.	Description	Spec.1	Spec.2	Spec.3	Spec.4
1	BODY	Aluminium	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	COVER	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	PAD	SILICONE	SILICONE	SILICONE	SILICONE
4	DIAPHRAGM	TEFLON	TEFLON	TEFLON	TEFLON
5	PLATE	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	WEIGHT PLATE	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

EH (Hinged Type)

No.	Description	Spec.1	Spec.2	Spec.3	Spec.4
1	BODY	Aluminium	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
2	COVER	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
3	PAD	SILICONE	SILICONE	SILICONE	SILICONE
4	DIAPHRAGM	TEFLON	TEFLON	TEFLON	TEFLON
5	PLATE	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L
6	WEIGHT PLATE	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
7	HINGE	Carbon Steel	Carbon Steel	Stainless Steel 304	Stainless Steel 316/316L
8	BOLT / NUT	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316/316L

* Other material is available on special request by customers.

Gauge Hatch Cover for Storage Tanks

GH TYPE

Introduction

Gauge hatch covers are commonly used on storage tanks to provide access for taking measurements, performing inspections, or adding or removing materials. The type of gauge hatch cover used will depend on the specific requirements of the storage tank and the materials being stored.

Some common types of gauge hatch covers used for storage tanks include:

1. Bolted Hatch Covers: These covers are secured to the storage tank using bolts and gaskets, and are typically made of materials such as aluminum, stainless steel, or carbon steel. They provide a secure seal and are easy to open and close for routine inspections and maintenance.
2. Hinged Hatch Covers: Hinged hatch covers are designed to swing open on a hinge and are typically used on smaller storage tanks. They are easy to open and close and provide quick access for taking measurements or adding materials.

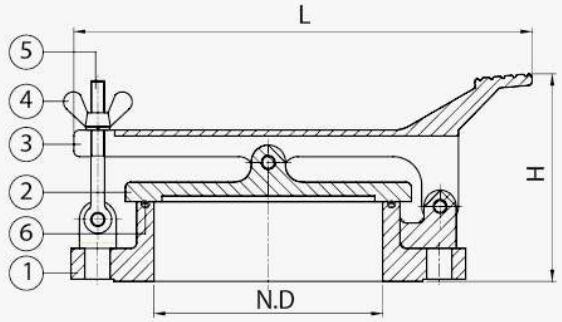
3. Quick-Opening Hatch Covers: These covers are designed for easy and quick access, and are commonly used in applications where frequent inspections or measurements are required. They are typically secured with a latch or clamp and can be easily opened and closed with one hand.

Benefits

1. Improved Safety: Gauge hatch covers provide a safe and secure way to access the interior of storage tanks without the risk of accidental spills or exposure to hazardous materials.
2. Increased Efficiency: Gauge hatch covers allow for quick and easy access to the interior of storage tanks, making it faster and more efficient to take measurements, perform inspections, or add or remove materials.
3. Protection from Environmental Factors: Gauge hatch covers help to protect the contents of storage tanks from exposure to environmental factors such as rain, wind, or debris.
4. Durability: Gauge hatch covers are typically made from durable materials such as stainless steel or aluminum, which ensures long-lasting performance even in harsh industrial environments.
5. Compliance with Regulations: Many industries have regulations and standards that require the use of gauge hatch covers on storage tanks to ensure safety and environmental compliance.

Gauge Hatch Cover for Storage Tanks

GH TYPE



Dimension Table

Unit = mm

SIZE	GH-4	GH-6	GH-8	GH-10
N.D	100	150	200	250
H	173	175	180	185
L	290	340	400	465

* Other size are available on request.

Materials of Construction

No.	Description	Spec.1	Spec.2	Spec.3
1	BODY	Aluminium	Carbon Steel	Stainless Steel
2	COVER	Aluminium	Carbon Steel	Stainless Steel
3	HINGE BASE	Aluminium	Carbon Steel	Stainless Steel
4	BUTTERFLY NUT	Stainless Steel		
5	HINGE BOLT	Stainless Steel		
6	O-RING	NBR		

* Other material is available on special request by customers.

TOP RELIABILITY OF SAFETY & ENVIRONMENT IS THE FIRST & MOST IMPORTANT

Products

- Air release valve
- Combination air release and vacuum breaker valve
- Vacuum breaker valve
- Surge relief valve
- Breather valve
- Flame arrester
- Emergency vent cover
- Gauge hatch cover
- High velocity Pressure / Vacuum relief valve
- Vapor Emission Control System
- Crankcase Explosion Relief valve
- Flameless explosion venting devices
- Solar Water Distiller

Application Fields

- Offshore & Ocean Gas Plants
- Desalination Plants
- Ballast System for Ships & Offshore Plants
- Sea & Fresh Water Plants
- Marine Tank Ships
- Cryogenic gas Facilities
- Petrochemical Plants
- Tank Terminals
- Marine Engines
- Generators
- Duct

Service station (Agent / Distributor)

ISO 9001/14001 AS9100 ATEX MED

PROSAVE CO., LTD.
www.prosave.co.kr

115-22, Techno valley 1-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do 50875, Korea
TEL. +82 (0)55 313 3510~1 / FAX. +82 (0)55 313 3512 / E-mail: prosave@prosave.co.kr