



STORAGE TANK PROTECTION EQUIPMENT

Premium technical presentation for industrial valve supply, procurement and project coordination across Latin American energy markets.

ISO 16852 / API 2000

IIA / IIB3 / IIC

RF / FF ENDS

PRIMARY APPLICATIONS	storage tanks protection
PRODUCT SCOPE	Flame Arrester, Pressure & Vacuum Relief Valve, Emergency Relief Vent
CONTACT	www.petrogasperu.com mail@petrogasperu.com

ENGINEERED SOLUTIONS. DELIVERED FAST.

High-performance industrial products for critical operations in Oil & Gas, Chemical, Mining, and Water Treatment across Latin America.



OUR PRODUCTS

-  FORGINGS & CASTINGS
-  SAFETY VALVES
-  BREATHER VALVES
-  FLAME ARRESTORS

FLAME ARRESTER, END OF LINE

NOMINAL SIZE:

NPS 2" ~ 40"

SUITABLE FOR GROUPS:

IIA, IIB3, IIC

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,
other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

**Description:**

End-of-line flame arresters are safety devices installed at the atmospheric vent outlets of storage tanks or pipelines to prevent external flames from igniting internal flammable vapors. Using a "quenching gap" principle (crimped metal ribbon), they absorb flame heat and extinguish it, allowing normal tank breathing. They protect against deflagrations caused by external ignition sources like lightning. Certified co compliant with TS: C(IIB3) gas group from 2" ~ 16"

Benefits:

- Excellent fire-blocking performance: The use of advanced fire-blocking technology and structural design can quickly and effectively prevent the spread of flames in the pipeline and minimize the risk of explosion.
- Sturdy and durable: The selection of high-quality materials and exquisite manufacturing technology makes the flame arrester have excellent pressure resistance, corrosion resistance and wear resistance, and can operate stably for a long time under harsh working conditions.
- Precise fit: It provides a wide range of sizes and materials, and can be customized according to different pipeline specifications and working environments to ensure seamless connection with your pipeline system and achieve the best fire-blocking effect.
- Easy to install and maintain: The design takes into account the convenience of actual operation, the installation process is simple and fast, and the daily maintenance requirements are low, which reduces your use costs and maintenance workload.

DEFLAGRATION FLAME ARRESTER, IN-LINE

NOMINAL SIZE:

NPS 2" ~ 40"

SUITABLE FOR GROUPS:

IIA, IIB3, IIC

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,
other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

**Description:**

In-Line Deflagration Flame Arresters are safety devices installed in piping systems to prevent the propagation of flames from explosions occurring at subsonic speeds (deflagration). They use crimped-ribbon or metal matrix elements to extinguish flame fronts, protecting downstream equipment. Key features include bi-directional protection, low pressure drop, and easy-to-clean elements. Certified co compliant with TS: C(IIB3) gas group from 2" ~ 16".

Benefits:

- Excellent flame arresting performance: Carefully designed and rigorously tested to quickly and effectively prevent flame spread in critical moments, reducing the risk of explosion.
- Flexible type selection: Offering three types - concentric, eccentric, and bi-directional - to meet different pipeline layouts and process requirements, adapting to various complex working conditions.
- High-quality material guarantee: Selecting high-quality materials with good corrosion resistance and mechanical strength to ensure long-term stable operation.

STABLE DETONATION FLAME ARRESTER, IN LINE

NOMINAL SIZE:

NPS 2" ~ 40"

SUITABLE FOR GROUPS:

IIA, IIB3, IIC

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,
other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

**Description:**

A detonation flame arrester is a safety device designed to stop supersonic flame propagation and high-pressure shock waves in pipelines, preventing explosions from reaching flammable storage or equipment. Unlike deflagration arresters, these rugged units handle "overdriven" detonations, utilizing a robust metal element matrix to absorb heat and quench the flame. ATEX certification: D(IIA) and C(IIB3) gas group for size 2" ~ 12".

Benefits:

-Exceptional Detonation Flame Arresting Capability: Engineered to handle the most challenging detonation scenarios, providing reliable protection.

-Versatile Configurations: The availability of concentric, eccentric, and bi-directional options ensures suitability for a wide range of pipeline layouts.

-Customizable Materials: Allows for selection of materials that best suit the specific environment and medium characteristics of the application.

-Rigorous Quality Assurance: Meeting international and domestic standards ensures long-term reliability and safety.

PRESSURE & VACUUM RELIEF VALVE, END OF LINE

NOMINAL SIZE:

NPS 2" ~ 16"

SET PRESSURE:

2mbar ~ 69mbar for weight loaded valves

69mbar ~ 999mbar for spring loaded valves

SET VACUUM:

2mbar ~ 43mbar for weight loaded valves

43mbar ~ 500mbar for spring loaded valves

DESIGN STANDARD: API 2000 or ISO 28300

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,
other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

Description:

An end-of-line breather valve (or pressure vacuum relief valve) is a critical safety device installed on storage tanks to protect against structural damage from internal pressure changes. It maintains a sealed state while automatically regulating overpressure (venting) and vacuum (breathing) during filling, emptying, or thermal fluctuations, reducing evaporation losses.

Benefits:

- Enhanced System Safety: Prevents overpressure and vacuum conditions that could lead to equipment damage or failure.
- Reduced Maintenance: Robust design and quality materials minimize the need for frequent maintenance and repairs.
- Customizable Options: The availability of different materials and pressure/vacuum settings allows for tailoring the valve to specific system requirements.



PRESSURE & VACUUM RELIEF VALVE, IN LINE

NOMINAL SIZE:

NPS 2" ~ 16"

SET PRESSURE:

2mbar ~ 69mbar for weight loaded valves

69mbar ~ 999mbar for spring loaded valves

SET VACUUM:

2mbar ~ 43mbar for weight loaded valves

43mbar ~ 500mbar for spring loaded valves DESIGN

STANDARD: API 2000 or ISO 28300

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,
other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

Description:

An in-line breather valve (or pressure/vacuum relief valve) function is to protect tanks, vessels, and pipelines from structural damage by controlling internal pressure. It automatically releases excess pressure (out-breathing) and allows air inflow (in-breathing) to prevent collapse, maintaining pressure equilibrium with the atmosphere.



PRESSURE RELIEF VALVE, IN LINE

NOMINAL SIZE:

NPS 2" ~ 16"

SET PRESSURE:

2mbar ~ 69mbar for weight loaded valves

69mbar ~ 999mbar for spring loaded valves DESIGN

STANDARD: API 2000 or ISO 28300

BODY MATERIAL GRADE:

A216 WCB, A351 CF3/M, A351 CF8/M,

other materials on demand.

INTERNAL PARTS MATERIAL GRADE:

A182 F304, A182 F316/L, other materials on demand.

**Description:**

The Pressure-Only Relief Valve is a highly specialized and meticulously engineered valve, specifically crafted to offer dependable overpressure protection across a diverse spectrum of industrial applications. This valve is not just a component but a critical safeguard that ensures the smooth and safe operation of industrial processes.

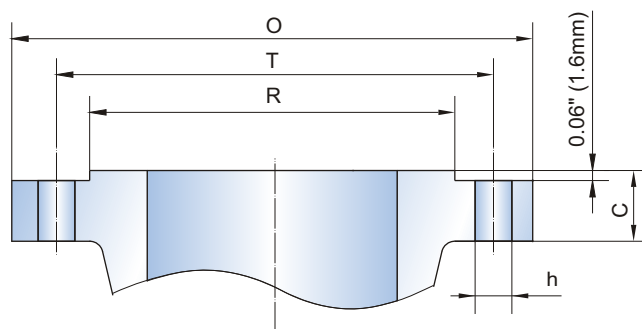
Designed with a focus on delivering unwavering reliability and performance, the Pressure-Only Relief Valve plays a vital role in preventing potential disasters caused by excessive pressure build-up. It acts as a sentinel, protecting valuable equipment and systems from the damaging effects of overpressure.

Benefits:

Protects Assets: By effectively preventing costly equipment failures and downtime resulting from overpressure incidents, the valve safeguards the investment in industrial assets. It helps to maintain the operational continuity and productivity of industrial processes, reducing the financial impact of potential disruptions.

-Reduces Maintenance Costs: The valve's long-lasting performance and reliable sealing minimize the need for frequent maintenance and component replacements. This leads to reduced maintenance costs, increased operational efficiency, and a lower total cost of ownership over the valve's lifespan.

CLASS 150 300 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
150	2	50	6.00	152	3.62	92	0.62	16	4.75	120.5	0.75	19	4	5/8
	2 1/2	65	7.00	178	4.12	105	0.69	18	5.50	139.5	0.75	19	4	5/8
	3	80	7.50	190	5.00	127	0.75	19	6.00	152.5	0.75	19	4	5/8
	4	100	9.00	229	6.19	157	0.94	24	7.50	190.5	0.75	19	8	5/8
	6	150	11.00	279	8.50	216	1.00	26	9.50	241.5	0.88	22	8	3/4
	8	200	13.50	343	10.62	270	1.12	29	11.75	298.5	0.88	22	8	3/4
	10	250	16.00	406	12.75	324	1.19	31	14.25	362	1.00	25	12	7/8
	12	300	19.00	483	15.00	381	1.25	32	17.00	432	1.00	25	12	7/8
	14	350	21.00	533	16.25	413	1.38	35	18.75	476	1.12	29	12	1
	16	400	23.50	597	18.50	470	1.44	37	21.25	540	1.12	29	16	1
	18	450	25.00	635	21.00	533	1.56	40	22.75	578	1.25	32	16	1 1/8
	20	500	27.50	699	23.00	584	1.69	43	25.00	635	1.25	32	20	1 1/8
	24	600	32.00	813	27.25	692	1.88	48	29.50	749.5	1.38	35	20	1 1/4
	26	650	34.25	870	29.50	749	2.69	69	31.75	806.5	1.38	35	24	1 1/4
	28	700	36.50	927	31.50	800	2.81	72	34.00	863.5	1.38	35	28	1 1/4
	30	750	38.75	984	33.75	857	2.94	75	36.00	914.5	1.38	35	28	1 1/4
	32	800	41.75	1060	36.00	914	3.19	81	38.50	978	1.62	41	28	1 1/2
	36	900	46.00	1168	40.25	1022	3.56	91	42.75	1086	1.62	41	32	1 1/2
300	40	1000	50.75	1289	44.25	1124	3.56	91	47.25	1200	1.62	41	36	1 1/2
	42	1050	53.00	1346	47.00	1194	3.81	97	49.50	1257.5	1.62	41	36	1 1/2
	48	1200	59.50	1511	53.50	1359	4.25	108	56.00	1422.5	1.62	41	44	1 1/2
	2	50	6.50	165	3.62	92	0.88	23	5.00	127	0.75	19	8	5/8
	2 1/2	65	7.50	190	4.12	105	1.00	26	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.12	29	6.62	168.5	0.88	22	8	3/4
	4	100	10.00	254	6.19	157	1.25	32	7.88	200	0.88	22	8	3/4
	6	150	12.50	318	8.50	216	1.44	37	10.62	270	0.88	22	12	3/4
	8	200	15.00	381	10.62	270	1.62	42	13.00	330	1.00	25	12	7/8
	10	250	17.50	445	12.75	324	1.88	48	15.25	387.5	1.12	29	16	1
	12	300	20.50	521	15.00	381	2.00	51	17.75	451	1.25	32	16	1 1/8
	14	350	23.00	584	16.25	413	2.12	54	20.25	514.5	1.25	32	20	1 1/8
	16	400	25.50	648	18.50	470	2.25	58	22.50	571.5	1.38	35	20	1 1/4
	18	450	28.00	711	21.00	533	2.38	61	24.75	628.5	1.38	35	24	1 1/4
	20	500	30.50	775	23.00	584	2.50	64	27.00	686	1.38	35	24	1 1/4
	24	600	36.00	914	27.25	692	2.75	70	32.00	813	1.62	41	24	1 1/2
	26	650	38.25	972	29.50	749	3.12	80	34.50	876.5	1.75	45	28	1 5/8
	28	700	40.75	1035	31.50	800	3.38	86	37.00	940	1.75	45	28	1 5/8
	30	750	43.00	1092	33.75	857	3.62	92	39.25	997	1.88	48	28	1 3/4
	32	800	45.25	1149	36.00	914	3.88	98	41.50	1054	2.00	51	28	1 7/8
	36	900	50.00	1270	40.25	1022	4.12	105	46.00	1168.5	2.12	54	32	2

End Flange Dimensions:

Size 2"-24" to ASME B16.5, Size 26"-48" to ASME B16.47 A.

Tolerances: Unit inch

Thickness C:

NPS ≤ 18" +0.12, -0

NPS ≥ 20" +0.19, -0

Drilling and Facing:

Bolt Circle Diameter h: ± 0.06

Center to Center of Adjacent Bolt Holes: ± 0.03

Eccentricity Between Bolt Circle Diameter and Machined Facing Diameters:

NPS ≤ 2 1/2" ± 0.03

NPS ≥ 3" ± 0.06

Outside Diameter R:

0.06 Raised Face: NPS 2"-24" ± 0.03

0.25 Raised Face: NPS 2"-24" ± 0.02

NPS ≥ 26" ± 0.08

NPS ≥ 26" ± 0.04