R.D 05

ChloroMaster

ECS Co. Ltd

Rupture Disc

INSTRUCTION MANUAL

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Rupture Disc Selection Guide

Reverse Acting (Compression-Loaded) Metal Rupture Disc							
Type	Flow	Sizes	Pressures	SOR	VSR	Holder	Service
YD		mm 25-600	barg 0.5-150	90%	no	YDJA	Gas
Reverse acting solid metal , knife blade in outlet of Holder and non-fragmentation design							
YE		mm 25-600	barg 0.21-50	90%	no	YJA	Gas
Reverse acting solid metal with crocodile tooth,non-fragmentation design							
YC		mm 25-600	barg 2-70	90%	no	YJA	Gas
Reverse acting solid metal with cross-scored, non-fragmentation design							
YF		mm 25-600	barg 0.15-70	90%	no	YJA	Gas or Liquid
Reverse acting composite metal , non-fragmentation design							
YFW		mm 25-100	barg 0.5-20	90%	no		Gas or Liquid
Reverse acting composite metal, with FDA gasket ,applied in food and sanitary system, non-fragmentation design							
YDC		mm 80-300	barg 1"WC -10.335	85%	yes		Gas or Liquid
Ultra-Low pressure/Two-way rupture disc with fragment resistant design, preventing over pressure or vacuum in storage tanks.							

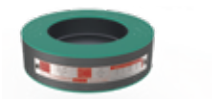
Note: Standard Operating Ratio is stated as a percentage of minimum burst pressure(indluding burst tolerance)

Rupture Disc Selection Guide

Reverse Acting (Compression-Loaded) Metal Rupture Disc

Type	Flow	Sizes	Pressures	SOR	VSR	Holder	Service
LP						**LJA**	
		mm 3-600	barg 1.7-260	70%	yes		Liquid or Gas
Forward acting conventional solid metal disc with fragment resistant design.							
LF						**LJA**	
		mm 15-1100	barg 0.02-200	80%	yes		Liquid or Gas
Forward acting composite metal disc with fragment resistant design.							
LC						**LJA**	
		mm 20-600	barg 1-250	85%	no		Liquid or Gas
Forward acting solid metal with cross-scored, non-fragmentation design.							
PF							
		mm 25-1200	barg 0.02-100	50%	yes	Mounts directly between standard ANSI &DIN Flanges	Liquid or Gas
Flat composite metal disc with fragment resistant design.							

Nonmetal Rupture Disc

Type	Flow	Sizes	Pressures	SOR	VSR	Holder	Service
PM							
		mm 25-600	barg 0.05-10	80%	yes	Mounts directly between standard ANSI &DIN Flanges	Liquid or Gas
Graphite rupture disc , highly corrosive applications.							
PVC rupture disc							
		mm 25-600	barg 0.05-10	80%	yes	Mounts directly between standard ANSI &DIN Flanges	Liquid or Gas
Mainly in RO pressure vessels or piping systems.							

SOR : Standard Operating Ratio VSR : Vacuum Support Required

Repture disc selection guide

Assemblies

Screw Type Holder

Screw type Holders are reusable for high pressure vessels, gas cylinders, laboratory equipment, autoclave and portable compressed air systems.

Non-standard Rupture Disc

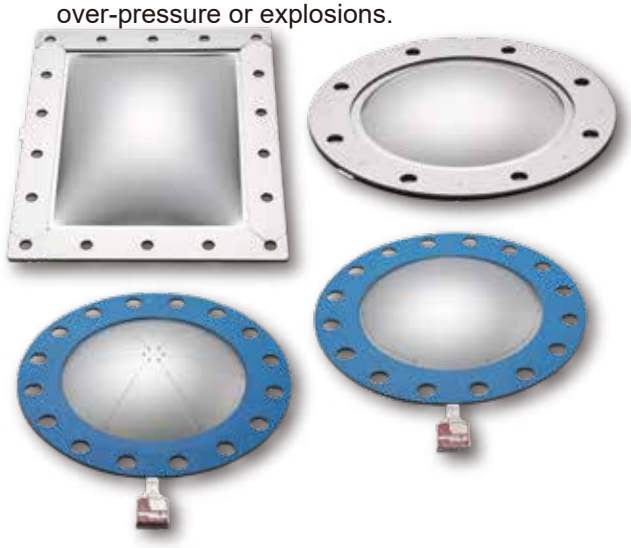
Non-standard Rupture Discs are applied in over-pressure protection of plastic and rubber extrusion processes.

BI Burst Sensor

The BI Burst Sensor offers a simple and effective means of indication over-pressure or discharge indication for metal rupture disk applications.

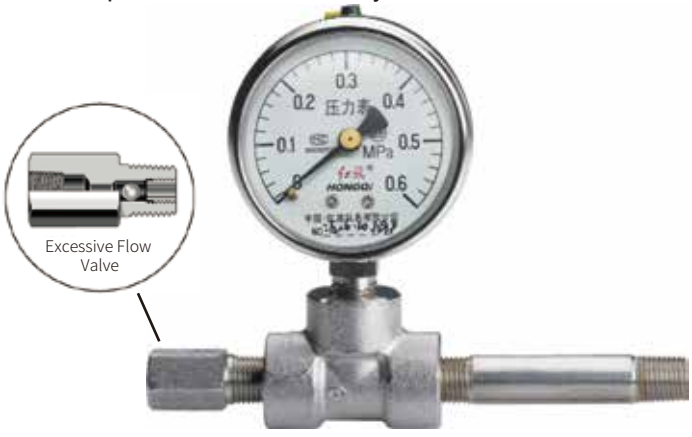
Explosion Relief Venting

Explosion venting panels are designed for large area of over-pressure relief, mainly in potential dust explosion applications to minimize the damage to personnel and devices caused by over-pressure or explosions.



Excessive Flow Valve & Pressure Gauge

When Rupture Disc is used in series with Safety Valve, Excessive Flow Valve and Pressure Gauge
are used to monitor the space between a rupture disk and relief valve or the presence of back-pressure in a header system.



Reverse Acting Knife Blade Rupture Disc/YD Series

The convex of reverse acting rupture disc is on the high pressure process side. When the solid metal disc is compression-loaded, the disk reverses with the knife blades on the upper holder cutting it to relieve pressure.

Technical features

• Non-fragmentation design
• Operating ratios up to 90% of the low end of burst tolerance
• Suitable for gas service
• Standard manufacturing design range and total tolerance ensures marked rating on disk tag
does not exceed the MAWP of equipment
• Withstands full vacuum without additional support
• Standard materials: Stainless Steel, Inconel, Monel, Nickel, Aluminum. Exotic materials on requests.
• Sizes from 25mm to 600mm
• Burst ratings from 0.5barg to 150 barg
• Use of rupture discs in combination with safety valves
• 3-dimensional stainless steel tag engraved with complete disc specifications

Options

•Fluoropolymer liners can prevent corrosion of rupture discs
Note: The maximum temperature rating of rupture disks supplied with liners is lower than the base disk material.

Holder

YDJ inserted holder is designed for YD series rupture discs.
Standard Holder Material: Stainless Steel , Carbon Steel,etc

Accessories

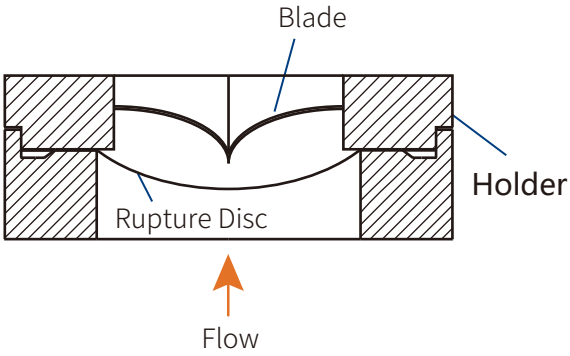
Pressure Gauge, Tee, Tube, Excessive Flow Valve, Special Flange Face, Coating

Protection of Safety Relief Valve

• When a disk is mounted under a Safety Relief Valve, the working components of the valve are isolated from hostile environments.
• Tell-Tale Assembly： Pressure Gauge,Tee,Excess Flow Valve,Tube

Before and after bursting of YD Rupture Disc

YDJ Holder



YD Rupture Disc mounts in YDJ Holder

Reverse Acting Knife Blade Rupture Disc/YD Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Nickel				Monel				Inconel				316L			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	101.5	1740	7	120	101.5	1740	7	120	101.5	1740	7	120	101.5	1740	7	120
1¼"	32	87	1740	6	120	87	1740	6	120	87	1740	6	120	87	1740	6	120
1½"	40	79.8	1595	5.5	110	79.8	1595	5.5	110	79.8	1595	5.5	110	79.8	1595	5.5	110
2"	50	50.8	1595	3.5	110	50.8	1595	3.5	110	50.8	1595	3.5	110	50.8	1595	3.5	110
2½"	65	50.8	1450	3.5	100	50.8	1450	3.5	100	50.8	1450	3.5	100	50.8	1450	3.5	100
3"	80	43.5	1450	3	100	43.5	1450	3	100	43.5	1450	3	100	43.5	1450	3	100
4"	100	43.5	1450	3	100	43.5	1450	3	100	43.5	1450	3	100	43.5	1450	3	100
5"	125	29	1160	2	80	29	1160	2	80	29	1160	2	80	29	1160	2	80
6"	150	29	870	2	60	29	870	2	60	29	870	2	60	29	870	2	60
8"	200	29	798	2	55	29	798	2	55	29	798	2	55	29	798	2	55
10"	250	29	725	2	50	29	725	2	50	29	725	2	50	29	725	2	50
12"	300	29	580	2	40	29	580	2	40	29	580	2	40	29	580	2	40
14"	350	29	435	2	30	29	435	2	30	29	435	2	30	29	435	2	30
16"	400	29	435	2	30	29	435	2	30	29	435	2	30	29	435	2	30
Max. Temp.		752°F (400°C)				806°F (430°C)				896°F (480°C)				752°F (400°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

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Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Reverse Acting Crocodile Tooth Rupture Disc/YE Series

The convex of reverse acting rupture disc is on the high pressure process side. When the metal disc is compression-loaded, the disk reverses with a crocodile tooth diaphragm cutting it to relieve pressure.

Technical features

• Non-fragmentation design
• Operating ratios up to 90% of the low end of burst tolerance
• Disc design offers high cycle life(compared with forward acting rupture disc)
• Suitable for gas service
• Standard manufacturing design range and total tolerance ensures marked rating on disk tag does not exceed the MAWP of equipment
• Withstand full vacuum without additional support
• Wide range of standard and exotic materials available
• Sizes from 25mm to 600mm
• Burst ratings from 0.21barg to 50 barg
• Use of rupture discs in combination with safety valves
• 3-dimensional stainless steel tag engraved with complete disc specifications

Options

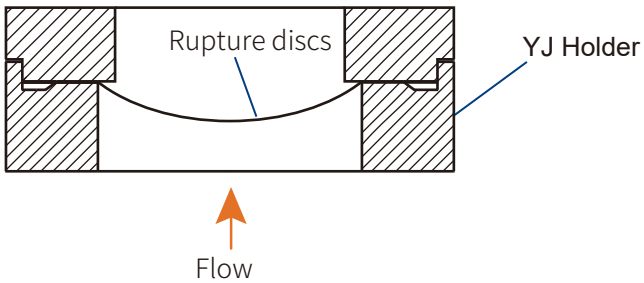
•Fluoropolymer liners or coatings
•Burst Indicator
*Note: The maximum temperature rating of rupture disks supplied with liners and BI is lower than the base disk material.

Protection of Safety Relief Valve

• When a disk is mounted under a Safety Relief Valve, the working components of the valve are isolated from hostile environments.
• Tell-Tale Assembly： Pressure Gauge,Tee,Excess Flow Valve,Tube

Before and after bursting of YE Rupture Disc

YJ Holder



Reverse acting rupture discs mount in YJ Holders

Reverse Acting Crocodile Tooth Rupture Disc/YE Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Nickel				Monel				Inconel				316L				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
¾"	20	43.5	583	3	40.2	43.5	661	3	45.6	58	783	4	54	43.5	870	3	60	130.5	870	9	60
1"	25	29	486	2	33.5	29	551	2	38	36.3	653	2.5	45	29	725	2	50	87	725	6	50
1¼"	32	20.3	438	1.4	30.2	26.1	496	1.8	34.2	26.1	587	1.8	40.5	26.1	653	1.8	45	58	653	4	45
1½"	40	1.5	341	0.1	23.5	18.9	386	1.3	26.6	18.9	457	1.3	31.5	18.9	508	1.3	35	43.5	508	3	35
2"	50	11.6	262	0.8	18.1	14.5	297	1	20.5	14.5	352	1	24.3	14.5	392	1	27	29	392	2	27
2½"	65	7.3	165	0.5	11.4	14.5	187	1	12.9	14.5	222	1	15.3	14.5	247	1	17	21.8	247	1.5	17
3"	80	7.3	136	0.5	9.4	11.6	154	0.8	10.6	11.6	183	0.8	12.6	11.6	203	0.8	14	17.4	203	1.2	14
4"	100	7.3	87	0.5	6	11.6	99	0.8	6.8	11.6	117	0.8	8.1	11.6	131	0.8	9	11.6	131	0.8	9
5"	125	7.3	68	0.5	4.7	11.6	77	0.8	5.3	11.6	91	0.8	6.3	11.6	102	0.8	7	11.6	102	0.8	7
6"	150	7.3	58	0.5	4	10.2	67	0.7	4.6	10.2	78	0.7	5.4	10.2	87	0.7	6	10.2	87	0.7	6
8"	200	7.3	39	0.5	2.7	10.2	44	0.7	3	10.2	52	0.7	3.6	10.2	58	0.7	4	10.2	58	0.7	4
10"	250	7.3	33	0.5	2.3	10.2	39	0.7	2.7	10.2	46	0.7	3.2	10.2	51	0.7	3.5	10.2	51	0.7	3.5
12"	300	7.3	29	0.5	2	10.2	33	0.7	2.3	10.2	39	0.7	2.7	10.2	44	0.7	3	10.2	44	0.7	3
Max. Temp.		752°F (400°C)				806°F (430°C)				896°F (480°C)				752°F (400°C)				986°F (530°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Reverse Acting Scored Rupture Disc/YC Series

The convex of reverse acting rupture disc is on the high pressure process side. When the metal disc is compression-loaded, the disk reverses and bursts along the prescored line to relieve pressure.

Before and after bursting of YC Rupture Disc

Technical features

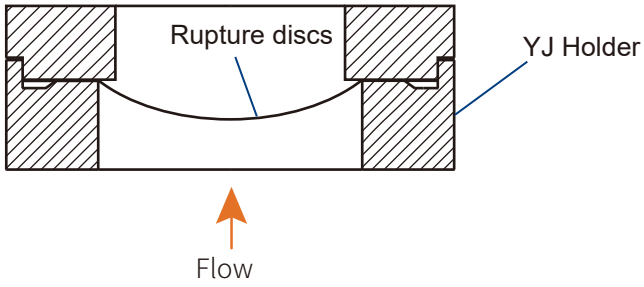
- Non-fragmentation design
- Operating ratios up to 90% of the low end of burst tolerance
- Disc design offers high cycle life(compared with forward acting rupture disc)
- Suitable for gas service only
- Standard manufacturing design range and total tolerance ensures marked rating on disk tag does not exceed the MAWP of equipment
- Withstand full vacuum without additional support
- Wide range of standard and exotic materials available
- Sizes from 25mm to 600mm
- Burst ratings from 2barg to 70 barg
- Resisting product build-up. The smooth convex side of the disc is exposed to the process media
- Use of rupture discs in series with safety valves
- 3-dimensional stainless steel tag engraved with complete disc specifications

YJ Holder

Options

- Fluoropolymer liners or coatings
- Burst Indicator

*Note: The maximum temperature rating of rupture disks supplied with liners and BI is lower than the base disk material.



Reverse acting rupture discs mount in YJ Holders

Protection of Safety Relief Valve

- When a disk is mounted under a Safety Relief Valve, the working components of the valve are isolated from hostile environments.
- Tell-Tale Assembly： Pressure Gauge,Tee,Excess Flow Valve,Tube

Reverse Acting Scored Rupture Disc/YC Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Nickel				Monel				Inconel				316L				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
¾"	20	261	1450	18	100	435	1885	30	130	435	1885	30	130	435	1885	30	130	580	1885	40	130
1"	25	145	1450	10	100	232	1885	16	130	232	1885	16	130	232	1885	16	130	362.5	1885	25	130
1¼"	32	116	1450	8	100	232	1885	16	130	232	1885	16	130	232	1885	16	130	319	1885	22	130
1½"	40	87	1450	6	100	203	1885	14	130	203	1885	14	130	203	1885	14	130	261	1885	18	130
2"	50	72.5	1450	5	100	174	1885	12	130	174	1885	12	130	174	1885	12	130	217.5	1885	15	130
2½"	65	72.5	1305	5	90	145	1740	10	120	145	1740	10	120	145	1740	10	120	217.5	1740	15	120
3"	80	58	1160	4	80	145	1740	10	120	145	1740	10	120	145	1740	10	120	217.5	1740	15	120
4"	100	43.5	1015	3	70	130.5	1450	9	100	130.5	1450	9	100	130.5	1450	9	100	174	1450	12	100
5"	125	43.5	870	3	60	116	1160	8	80	116	1160	8	80	116	1160	8	80	174	1160	12	80
6"	150	43.5	725	3	50	101.5	870	7	60	101.5	870	7	60	101.5	870	7	60	145	870	10	60
8"	200	29	580	2	40	87	725	6	50	87	725	6	50	87	725	6	50	145	725	10	50
10"	250	29	435	2	30	72.5	580	5	40	72.5	580	5	40	72.5	580	5	40	145	580	10	40
12"	300	21.8	290	1.5	20	58	435	4	30	58	435	4	30	58	435	4	30	130.5	435	9	30
14"	350	21.8	145	1.5	10	50.8	362.5	3.5	25	50.8	362.5	3.5	25	50.8	362.5	3.5	25	116	362.5	8	25
16"	400	14.5	116	1	8	36.3	290	2.5	20	36.3	290	2.5	20	36.3	290	2.5	20	116	290	8	20
Max. Temp.		752°F (400°C)				806°F (430°C)				896°F (480°C)				752°F (400°C)				986°F (530°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Reverse Acting Slotted Rupture Disc/YF Series

The convex of reverse acting rupture disc is on the high pressure process side. YF is a composite design.When the metal disc is compression-loaded, the disk reverses and the sealing film is cut to relieve pressure.

Before and after bursting of YF Rupture Disc

Technical features

- Non-fragmentation design
- Operating ratios up to 90% of the low end of burst tolerance
- Suitable for gas, liquid or two-phase applications
- Standard manufacturing design range and total tolerance ensures marked rating on disk tag does not exceed the MAWP of equipment
- Withstand full vacuum without additional support
- Sizes from 25mm to 600mm
- Burst ratings from 0.15barg to 70 barg
- Use of rupture discs in series with safety valves
- 3-dimensional stainless steel tag engraved with complete disc specifications

YF Rupture Discs mount in YJ Holders

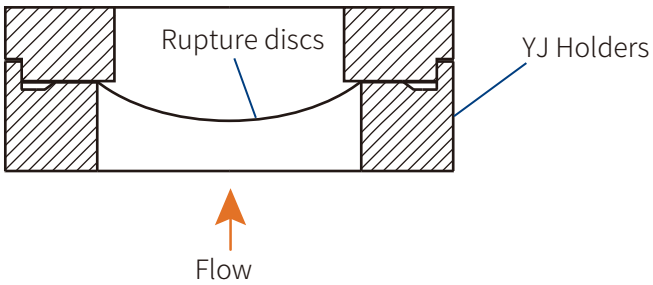
Options

- Fluoropolymer liners or coatings
- Burst Indicator

*Note: The maximum temperature rating of rupture disks supplied with liners and BI is lower than the base disk material.

Protection of Safety Relief Valve

- When a disk is mounted under a Safety Relief Valve, the working components of the valve are isolated from hostile environments.
- Tell-Tale Assembly： Pressure Gauge,Tee,Excess Flow Valve,Tube



Reverse acting rupture discs mount in YJ Holders

Reverse Acting Slotted Rupture Disc/YF Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Buckling pin element: 316L																			
		Sealing Membrane Materials: Optional material																			
		Nickel				Monel				Inconel				Stainless Steel				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
¾"	20	73	1015	5	70	87	1015	6	70	87	1015	6	70	72.5	1015	5	70	87	1015	6	70
1"	25	39.2	870	3	60	50.8	870	3.5	60	51	870	3.5	60	39.2	870	2.7	60	50.8	870	3.5	60
1¼"	32	36.3	870	2.5	60	43.5	870	3	60	44	870	3	60	36.3	870	2.5	60	43.5	870	3	60
1½"	40	23.2	725	1.6	50	36.3	725	2.5	50	36	725	2.5	50	23.2	725	1.6	50	36.3	725	2.5	50
2"	50	14.5	580	1	40	29	580	2	40	29	580	2	40	14.5	580	1	40	29	580	2	40
2½"	65	14.5	435	1	30	21.8	435	1.5	30	22	435	1.5	30	14.5	435	1	30	52.2	435	3.6	30
3"	80	11.6	406	0.8	28	21.8	406	1.5	28	22	406	1.5	28	11.6	406	0.8	28	42.1	406	2.9	28
4"	100	11.6	363	0.8	25	14.5	363	1	25	15	363	1	25	11.6	363	0.8	25	24.7	363	1.7	25
5"	125	8.7	305	0.6	21	11.6	305	0.8	21	12	305	0.8	21	8.7	305	0.6	21	17.4	305	1.2	21
6"	150	5.8	305	0.4	21	8.7	305	0.6	21	9	305	0.6	21	5.8	305	0.4	21	14.5	305	1	21
8"	200	4.4	189	0.3	13	5.8	189	0.4	13	6	189	0.4	13	4.4	189	0.3	13	8.7	189	0.6	13
10"	250	4.4	131	0.3	9	4.4	131	0.3	9	4	131	0.3	9	4.4	131	0.3	9	5.2	131	0.36	9
12"	300	2.9	80	0.2	5.5	2.9	80	0.2	5.5	3	80	0.2	5.5	2.9	80	0.2	5.5	3.6	80	0.25	5.5
14"	350	2.9	65	0.2	4.5	2.9	65	0.2	4.5	3	65	0.2	4.5	2.9	65	0.2	4.5	2.9	65	0.2	4.5
16"	400	2.9	46	0.2	3.2	2.9	46	0.2	3.2	3	46	0.2	3.2	2.9	46	0.2	3.2	2.9	46	0.2	3.2
Max. Temp.		752°F (400°C)				752°F (400°C)				752°F (400°C)				752°F (400°C)				752°F (400°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Sanitary Metal Rupture Disc/YFW Series

YFW Series rupture disc is an extension of YF disc,providing over-pressure protection in sanitary piping system.Applications include food processing, dairy, breweries, pharmaceutical, distilling,baking ,canning,cosmetics,biotechnology and petrochemical industries.

Before and after bursting of YFW Rupture Disc

Technical features

- Providing over-pressure protection for sanitary piping systems
- Ideal for high purity and corrosion resistance applications
- Designed for non-fragmentation
- Suitable for liquid, gas, or two-phase applications
- Standard manufacturing range :0%
- Operating ratios up to 90% of the low end of burst tolerance,even to 95% of bursting pressure.
- Withstand full vacuum without back pressure support
- Installed in Tri-clamp®/Tri-clover clamp
- standard gasket material: EPDM(FDA),

YFW Rupture Disc mounts in standard clamp

Options

- Burst Indicator
- Standard Clamp

YFW Rupture Disc, Gasket,Sensor

Clamps

- Size： 1"-4"
- Material： Stainless Steel

Sanitary Metal Rupture Disc/YFW Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Size **in. (mm)**	Burst Pressure – **psig (bar)**			Min. Relieving Area **in² (cm²)**	Clamp Size **in (mm)**	
	Min.		Max.			
	316SS*				OD	ID
1”	11	16	83	0.35	1.984	0.856
25 mm	(0.76)	(1.10)	(5.72)	(2.25)	(50.4)	(21.7)
1-1/2”	9	11	27	0.79	1.984	1.356
40 mm	(0.62)	(0.76)	(1.86)	(5.09)	(50.4)	(34.4)
2”	7	11	24	1.63	2.516	1.856
50 mm	(0.48)	(0.76)	(1.66)	(8.77)	(63.9)	(47.1)
3”	6	10	20	3.86	3.579	2.865
80 mm	(0.41)	(0.69)	(1.38)	(24.9)	(90.9)	(72.5)
4”	3	8	18	6.82	4.682	3.810
100 mm	(0.21)	(0.55)	(1.24)	(43.99)	(118.9)	(96.8)

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk’s marked burst

Gasket

Material	Max. Temperature
Black Nitrile Rubber	230°F (110°C)
White Nitrile Rubber	230°F (110°C)
Black EPDM	347°F (175°C)
Black Viton	400°F (204°C)

Ultra-Low Pressure & Bi-Directional Rupture Disc/YDC Series

YDC series rupture disc is a two-way rupture disc design, which provides protection against over-pressure or vacuum for storage tanks.

YDC Rupture Disc

Technical features

- High accuracy, working under ultra-low pressure
- Bi-directional discharge design, precise laser cutting technology
- Size range: 3" (80mm) to 12" (300mm)
- Bursting pressure range: 1 inch water column to 150psig(10.335barg)
- Standard materials can be provided, or special materials can be customized
- 3D disc label, including all parameters of the disc
- special YDCJ holder

YDC Rupture Disc bursts at bursting pressure

YDC Rupture Disc bursts at bursting vacuum

YDC Series Components

• Protective ring provides protection to seal in case of positive pressure.
• Seal evenly distributes pressure in both the vacuum and positive pressure direction.• Girdle Standard material is 316SS. Also, available in TEFLON. Controls the standard min. To max. Inches of water column negative(vacuum) pressure rating

Options

• Burst Indicator
• Laser cut pressure cap Provides protection to seal in case of positive pressure
• Laser cut burst cap Provides positive pressure relief at specified rating
Note: This option will significantly reduce the flowing capacities in the vacuum relief direction.Contact BasCo for flow rate information.

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Vacuum Relief				Overpressure Relief			
NPS [in]	DN [mm]	InWC		barg		psig		barg	
		min.	max.	min.	max.	min.	max.	min.	max.
2"	50	7.5	44	0.019	0.11	4.4	145	0.3	10
2½"	65	6.8	44	0.017	0.11	3.6	87	0.25	6
3"	80	6	44	0.015	0.11	2.9	73	0.2	5
4"	100	5.5	44	0.014	0.11	2.2	58	0.15	4
5"	125	5.5	44	0.014	0.11	2.2	58	0.15	4
6"	150	5.5	44	0.014	0.11	2.2	36	0.15	2.5
8"	200	5.5	44	0.014	0.11	1.5	29	0.1	2
10"	250	5.5	32	0.014	0.08	1.2	29	0.08	2
Max. Temp.		176°F (80°C)				176°F (80°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Forward Acting Conventional Rupture Disc/LP Series

The concave of forward acting rupture disc is on the high pressure process side. LP is a single-piece metal, tension loaded design.

Before and after bursting of LP Rupture Disc

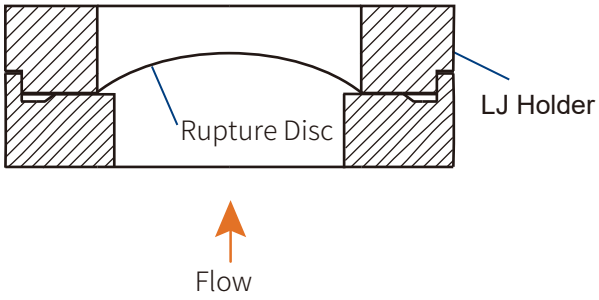
Technical features

- Forward acting rupture disc
- Bursting Pressure: 1.7~260 barg
- Operating ratios up to 70% of the low end of burst tolerance
- Some vacuum applications require a vacuum bracket
- Size 3 mm ~ 600 mm
- Debris from blasting
- Suitable for liquid, gas, or two-phase applications
- 3d disc label, including all parameters of the disc

LJ Holder

Options

LP-V The back pressure bracket is mounted on the inlet side of the rupture disc and allows the rupture disc to support full vacuum.
LP-L Fluoroplastic lining/coating provides protection against corrosive as required.
LP-R The support ring protects precision materials and provides stability when back pressure brackets are not provided.



Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Nickel				Monel				Inconel				316L			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	290	3770	20	260	334	3770	23	260	406	3770	28	260	348	3770	24	260
1¼"	32	232	3770	16	260	261	3770	18	260	319	3770	22	260	276	3770	19	260
1½"	40	189	3770	13	260	218	3770	15	260	261	3770	18	260	218	3770	15	260
2"	50	160	3770	11	260	189	3770	13	260	218	3770	15	260	189	3770	13	260
2½"	65	125	3770	8.6	260	145	3770	10	260	174	3770	12	260	145	3770	10	260
3"	80	112	3277	7.7	226	131	3770	9	260	145	3770	10	260	131	3770	9	260
4"	100	87	2509	6	173	98	2857	6.7	197	116	3393	8	234	102	3770	7	260
5"	125	73	2103	5	145	83	2407	5.7	166	102	2857	7	197	87	3306	6	228
6"	150	63	1842	4.3	127	73	2103	5	145	87	2494	6	172	73	3190	5	220
8"	200	48	1421	3.3	98	56	1624	3.8	112	66	1914	4.5	132	58	2219	4	153
10"	250	40	1160	2.7	80	44	1320	3	91	51	1566	3.5	108	44	1813	3	125
12"	300	34	957	2.3	66	38	1088	2.6	75	44	1291	3	89	37	1494	2.5	103
14"	350	29	856	2	59	34	972	2.3	67	40	1160	2.7	80	37	1334	2.5	92
16"	400	25	725	1.7	50	29	841	2	58	34	986	2.3	68	29	1160	2	80
Max. Temp.		752°F (400°C)				806°F (430°C)				896°F (480°C)				752°F (400°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Forward Acting Composite Rupture Disc/LF Series

The concave of forward acting rupture disc is on the high pressure process side. LF rupture disc consists of three parts: slotted burst cap,sealing film and back pressure support.

LF Rupture Disc

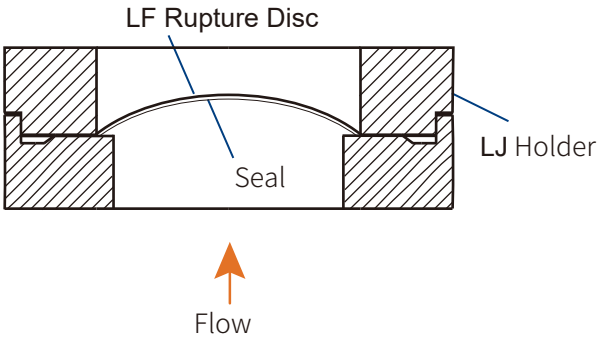
Technical features

- Forward acting composite rupture disc
- State-of-the-art laser slotted metal section
- Operating ratios up to 80% of the low end of burst tolerance
- Fragment resistant design
- Standard Material:SS/FEP/SS. Other seal materials are available
- Suitable for liquid, gas, or two-phase applications
- Sizes from 15mm to 1100mm
- Burst ratings from 0.02barg to 2000 barg
- Attached 3-dimensional stainless steel tag is engraved with complete disc specification

After bursting of LF Rupture Disc

Working Principle

LF Series Discs mount with the concave surface facing the process media. The laser cut determines the burst rating of the Disc.When the LF Series Disc ruptures,it opens along the predetermined pattern and folds back against the holder.



LF Rupture Disc mounts in LJ Holder

Forward Acting Composite Rupture Disc/LF Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Sealing Membrane Materials															
		FEP				PTFE				luminum				Nickel			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	11.6	1015	0.8	70	29	1015	2	70	87	1595	6	110	348	2175	24	150
1¼"	32	8.7	870	0.6	60	21.75	870	1.5	60	65.25	1450	4.5	100	290	1305	20	90
1½"	40	5.8	725	0.4	50	14.5	725	1	50	52.2	1305	3.6	90	217.5	1160	15	80
2"	50	4.35	580	0.3	40	10.88	580	0.75	40	49.3	957	3.4	66	203	1015	14	70
2½"	65	3.63	522	0.25	36	9.08	522	0.63	36	36.25	841	2.5	58	159.5	870	11	60
3"	80	2.9	464	0.2	32	7.25	464	0.5	32	31.9	725	2.2	50	145	725	10	50
4"	100	2.18	420.5	0.15	29	5.45	420.5	0.38	29	26.1	638	1.8	44	116	580	8	40
5"	125	2.18	377	0.15	26	5.45	377	0.38	26	21.75	580	1.5	40	101.5	580	7	40
6"	150	2.18	333.5	0.15	23	5.45	333.5	0.38	23	18.85	493	1.3	34	87	435	6	30
8"	200	1.45	304.5	0.1	21	3.63	304.5	0.25	21	14.5	435	1	30	72.5	435	5	30
10"	250	1.16	246.5	0.08	17	2.9	246.5	0.2	17	11.6	348	0.8	24	58	435	4	30
12"	300	1.02	203	0.07	14	2.55	203	0.18	14	10.15	290	0.7	20	43.5	362.5	3	25
14"	350	0.87	174	0.06	12	2.18	174	0.15	12	8.7	275.5	0.6	19	43.5	362.5	3	25
16"	400	0.73	145	0.05	10	1.83	145	0.13	10	7.25	261	0.5	18	36.25	290	2.5	20
Max. Temp.		392°F (200°C)				500°F (260°C)				752°F (400°C)				986°F (530°C)			

Disk Size		Sealing Membrane Materials															
		Monel				Inconel				Stainless Steel				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	406	2175	28	150	478.5	2175	33	150	406	2175	28	150	435	2175	30	150
1¼"	32	319	1305	22	90	377	1305	26	90	319	1305	22	90	333.5	1305	23	90
1½"	40	261	1160	18	80	304.5	1160	21	80	261	1160	18	80	275.5	1160	19	80
2"	50	232	1015	16	70	275.5	1015	19	70	232	1015	16	70	261	1015	18	70
2½"	65	174	870	12	60	203	870	14	60	174	870	12	60	377	870	26	60
3"	80	159.5	725	11	50	174	725	12	50	159.5	725	11	50	333.5	725	23	50
4"	100	130.5	580	9	40	145	580	10	40	130.5	580	9	40	261	580	18	40
5"	125	116	580	8	40	130.5	580	9	40	116	580	8	40	217.5	580	15	40
6"	150	101.5	435	7	30	116	435	8	30	101.5	435	7	30	203	435	14	30
8"	200	87	435	6	30	101.5	435	7	30	87	435	6	30	159.5	435	11	30
10"	250	72.5	435	5	30	87	435	6	30	72.5	435	5	30	130.5	435	9	30
12"	300	58	362.5	4	25	72.5	362.5	5	25	58	362.5	4	25	116	362.5	8	25
14"	350	58	362.5	4	25	72.5	362.5	5	25	58	362.5	4	25	101.5	362.5	7	25
16"	400	43.5	290	3	20	58	290	4	20	43.5	290	3	20	87	290	6	20
Max. Temp.		986°F (530°C)				986°F (530°C)				986°F (530°C)				986°F (530°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Forward Acting Scored Rupture Disc/LC Series

The concave of forward acting rupture disc is on the high pressure process side. LC rupture disc is a single piece of scored metal design.

Before and after bursting of LC Rupture Disc

Technical features

- Solid metal scored disc designed for Non-fragmentation
- Operating ratios up to 85% of the low end of burst tolerance
  (Contact BasCo for higher ratios)
- Withstand full vacuum without additional support
- Suitable for liquid, gas, or two-phase applications
- Sizes from 20mm to 600mm
- Burst ratings from 1barg to 250 barg
- Standard materials: Nickel, Stainless Steel
- Able to be combined with safety valve
- Attached 3-dimensional stainless steel tag is engraved with complete disc specifications

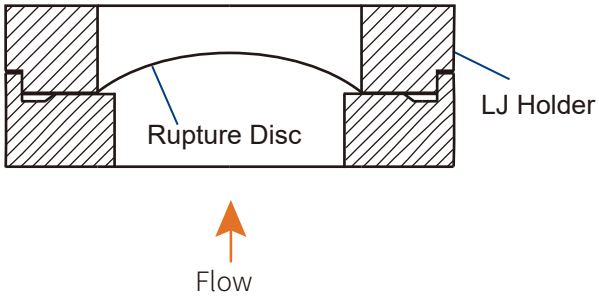
Working Principle

LC Series Discs mount with the concave surface facing the process media. As pressure increases above the recommended operating ratio,the score lines weaken until rupture occurs.When the LC Disc ruptures,the Disc opens along the score lines and folds back against the holder outlet.

LJ Holder

Options

- Fluoropolymer liners or coatings
- Burst Indicator
- Railcar Disc



Forward acting rupture discs mount in LJ Holders

Protection of Safety relief valves

- Use of rupture discs in combination with relief valves can prevent corrosion of the relief valve internals.
- Tell-Tale Assembly：Pressure Gauge、Tee、Excess Flow Valve、Tube

Forward Acting Scored Rupture Disc/LC Series

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Nickel				Monel				Inconel				316L				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	203	2030	14	140	290	2900	20	200	290	2900	20	200	290	2900	20	200	377	2900	26	200
1¼"	32	159.5	2030	11	140	217.5	2900	15	200	217.5	2900	15	200	217.5	2900	15	200	290	2900	20	200
1½"	40	159.5	2030	11	140	217.5	2900	15	200	217.5	2900	15	200	217.5	2900	15	200	290	2900	20	200
2"	50	130.5	2030	9	140	174	2900	12	200	174	2900	12	200	174	2900	12	200	232	2900	16	200
2½"	65	101.5	1740	7	120	145	2610	10	180	145	2610	10	180	145	2610	10	180	188.5	2610	13	180
3"	80	101.5	1450	7	100	145	2175	10	150	145	2175	10	150	145	2175	10	150	188.5	2175	13	150
4"	100	72.5	1450	5	100	101.5	2175	7	150	101.5	2175	7	150	101.5	2175	7	150	130.5	2175	9	150
5"	125	72.5	1160	5	80	87	1740	6	120	87	1740	6	120	87	1740	6	120	116	1740	8	120
6"	150	58	1015	4	70	72.5	1450	5	100	72.5	1450	5	100	72.5	1450	5	100	101.5	1450	7	100
8"	200	43.5	1015	3	70	58	1450	4	100	58	1450	4	100	58	1450	4	100	72.5	1450	5	100
10"	250	43.5	870	3	60	43.5	1160	3	80	43.5	1160	3	80	43.5	1160	3	80	58	1160	4	80
12"	300	29	725	2	50	36.3	870	2.5	60	36.3	870	2.5	60	36.3	870	2.5	60	43.5	870	3	60
14"	350	29	507.5	2	35	36.3	507.5	2.5	35	36.3	507.5	2.5	35	36.3	507.5	2.5	35	43.5	507.5	3	35
16"	400	29	290	2	20	29	290	2	20	29	290	2	20	29	290	2	20	43.5	290	3	20
Max. Temp.		752°F (400°C)				806°F (430°C)				896°F (480°C)				752°F (400°C)				986°F (530°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

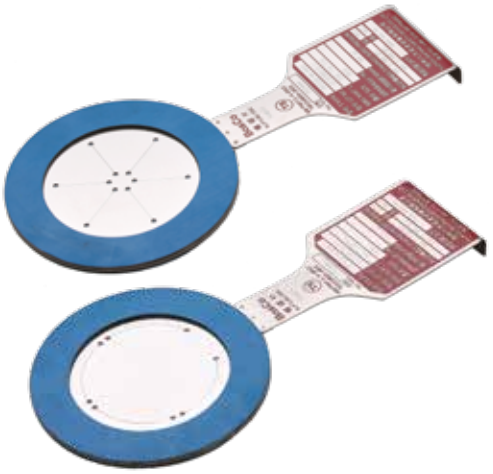
Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

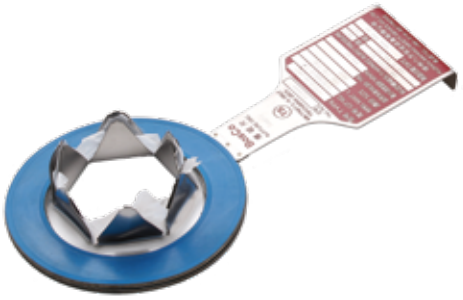
Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Flat Composite Rupture Disc/PF Series

Flat composite rupture disc with gasket is evolved from LF rupture disc,mainly used in low pressure application. PF rupture disc can mount between flanges.



PF Rupture Disc



After bursting of PF Rupture Disc

Technical features

- State-of-the-art laser slotted metal section
- No disc holder required. Mounts between standard or simple flanges
- Standard materials of construction: 316SS metal section(s), TFE seal, Non-asbestos gaskets (Other materials available)
- Burst ratings from 0.02barg to100 barg
- Sizes from 25mm to 1200mm
- Operating ratios up to 50% of the low end of burst tolerance

Storage Tank Protection

Storage Tank Protection Relief Valve Protection Storage tanks are made from relatively light gauge materials. This limits their ability to contain pressure and, if they are emptied without proper venting, makes them vulnerable to collapse.PF series rupture discs provide simple, inexpensive protection against either condition.
Disc size should be at least equal to the size of the flow inlet or outlet connection (whichever is greater) to the tank. Maximum rupture pressure should be no greater than the design pressure or vacuum (whichever is smaller) of the tank. Minimum rupture pressure should be at least 2 times the maximum working pressure or vacuum (whichever is

Relief Valve Protection

Corrosive elements in the atmosphere can enter a relief valve through its outlet and attack the valve's working parts. This may prevent the valve from functioning properly. Valves with outlets connected to common headers are especially vulnerable. A PF series rupture disc mounted on the valve's outlet flange protects valve components from hostile environments.
Disc size should be the same as the outlet flange of the valve. Maximum rupture pressure should be no greater than the set pressure of the valve. Minimum rupture

Burst Tolerance

GB 567-2012	
Rated Burst Pressure bar	Burst Tolerance
≥0.01~ <0.1	±50%
≥0.1~ <1	±25%
≥1~ <3	±0.015Mpa
≥3~ <1000	±5%
≥1000~ <5000	±4%

Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Options

- Burst Indication
- Teflon Gaskets
- Holder
- Railcar Disc

Flat Composite Rupture Disc/PF Series

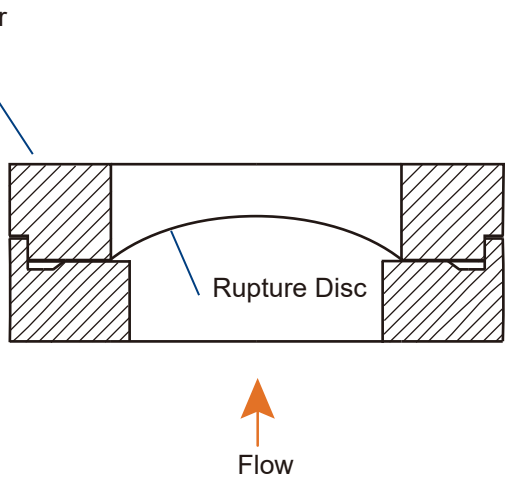
Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22℃)

Disk Size		Sealing Membrane Materials															
		FEP				PTFE				Aluminum				Nickel			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	11.6	1015	0.8	70	29	1015	2	70	87	1450	6	100	348	1450	24	100
1¼"	32	8.7	870	0.6	60	21.75	870	1.5	60	65.25	1087.5	4.5	75	290	1087.5	20	75
1½"	40	5.8	725	0.4	50	14.5	725	1	50	52.2	942.5	3.6	65	217.5	942.5	15	65
2"	50	4.35	580	0.3	40	10.88	580	0.75	40	49.3	797.5	3.4	55	203	797.5	14	55
2½"	65	3.63	522	0.25	36	9.08	522	0.63	36	36.25	725	2.5	50	159.5	725	11	50
3"	80	2.9	464	0.2	32	7.25	464	0.5	32	31.9	580	2.2	40	145	580	10	40
4"	100	2.18	420.5	0.15	29	5.45	420.5	0.38	29	26.1	435	1.8	30	116	435	8	30
5"	125	2.18	377	0.15	26	5.45	377	0.38	26	21.75	435	1.5	30	101.5	435	7	30
6"	150	2.18	333.5	0.15	23	5.45	333.5	0.38	23	18.85	362.5	1.3	25	87	362.5	6	25
8"	200	1.45	304.5	0.1	21	3.63	304.5	0.25	21	14.5	362.5	1	25	72.5	362.5	5	25
10"	250	1.16	246.5	0.08	17	2.9	246.5	0.2	17	11.6	362.5	0.8	25	58	362.5	4	25
12"	300	1.02	203	0.07	14	2.55	203	0.18	14	10.15	290	0.7	20	43.5	290	3	20
14"	350	0.87	174	0.06	12	2.18	174	0.15	12	8.7	290	0.6	20	43.5	290	3	20
16"	400	0.73	145	0.05	10	1.83	145	0.13	10	7.25	232	0.5	16	36.25	232	2.5	16
Max. Temp.		392°F (200°C)				500°F (260°C)				752°F (400°C)				986°F (530°C)			

Disk Size		Sealing Membrane Materials															
		Monel				Inconel				Stainless Steel				Hastelloy C-276			
NPS [in]	DN [mm]	psig		barg		psig		barg		psig		barg		psig		barg	
		min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,	min,	max,
1"	25	406	1450	28	100	478.5	1450	33	100	406	1450	28	100	435	1450	30	100
1¼"	32	319	1087.5	22	75	377	1087.5	26	75	319	1087.5	22	75	333.5	1087.5	23	75
1½"	40	261	942.5	18	65	304.5	942.5	21	65	261	942.5	18	65	275.5	942.5	19	65
2"	50	232	797.5	16	55	275.5	797.5	19	55	232	797.5	16	55	261	797.5	18	55
2½"	65	174	725	12	50	203	725	14	50	174	725	12	50	377	725	26	50
3"	80	159.5	580	11	40	174	580	12	40	159.5	580	11	40	333.5	580	23	40
4"	100	130.5	435	9	30	145	435	10	30	130.5	435	9	30	261	435	18	30
5"	125	116	435	8	30	130.5	435	9	30	116	435	8	30	217.5	435	15	30
6"	150	101.5	362.5	7	25	116	362.5	8	25	101.5	362.5	7	25	203	362.5	14	25
8"	200	87	362.5	6	25	101.5	362.5	7	25	87	362.5	6	25	159.5	362.5	11	25
10"	250	72.5	362.5	5	25	87	362.5	6	25	72.5	362.5	5	25	130.5	362.5	9	25
12"	300	58	290	4	20	72.5	290	5	20	58	290	4	20	116	290	8	20
14"	350	58	290	4	20	72.5	290	5	20	58	290	4	20	101.5	290	7	20
16"	400	43.5	232	3	16	58	232	4	16	43.5	232	3	16	87	232	6	16
Max. Temp.		986°F (530°C)				986°F (530°C)				986°F (530°C)				986°F (530°C)			

Notes: For higher temperatures, materials, sizes, burst ratings not shown,contact.

Rupture Disc Holder/LJ Series



Technical features

• Use with forward acting rupture discs
• Insert holder design
Can be pre-assembled in the workshop
Ensure that the bursting disc is not damaged when disassembling
• The rupture disc arch is contained in the holder assembly
Prevent damage to rupture discs when mounting to flanges
• applicable forward acting rupture discs
• Size from 1”to 12”
• standard materials: stainless steel, carbon steel
• Easy to disassemble without special tools
• suitable for 1 "-12" standard flanges
• With stainless steel nameplate containing parame-ters and a flow arrow

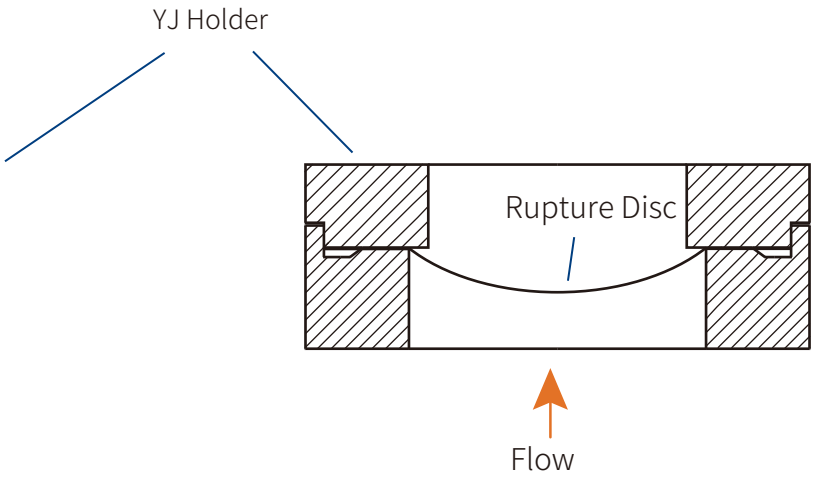
Options

tee, nozzle, pressure gauge,excess flow valve, lifting bolts, special coating

Size & Specification of Holders

Size		Flange Class		Hight		O.D	Est. Weight
in	mm	ANSI	DIN	LJ mm	YJ mm	mm	Kg
1	25	150	10/16	46	46	62	0.8
		300/600	25/40			66	0.9
1/2	40	150	10/16	46	51	82	1.3
		300/600	25/40			88	1.6
2	50	150	10/16	46	51	96	1.8
		300/600	25/40			100	2.0
3	80	150	10/16	46	51	128	2.6
		300/600	25/40			132	2.9
4	100	150	10/16	46	56	152	3.0
		300/600	25/40			156	3.4
6	150	150	10/16	56	61	206	5.9
		300/600	25/40			216	7.5
8	200	150	10/16	61	66	256	8.3
		300/600	25/40			274	12.2
10	250	150	10/16	71	76	310	13.0
		300/600	25/40			330	19.0
12	300	150	10/16	76	81	372	18.2
		300/600	25/40			389	24.7
14	350	150	10/16	91	91	418	26.8
		300/600	25/40			448	41.5
16	400	150	10/16	106	106	489	45.3
		300/600	25/40			503	54.4
18	450	150	10/16	116	116	528	53.2
		300/600	25/40			548	68.7
20	500	150	10/16	121	121	584	60.2
		300/600	25/40			609	82.7
24	600	150	10/16	126	126	690	78.7
		300/600	25/40			720	112.0

Rupture Disc Holder/YJ Series



Technical features

•Use with reverse acting rupture discs
•Insert holder design
Can be pre-assembled in the workshop
Ensure that the bursting disc is not damaged when disassembling
•The rupture disc arch is contained in the holder assembly
Prevent damage to rupture discs when mounting to flanges
• Size from 1” to 12”
• Standard materials: stainless steel, carbon steel
• Easy to disassemble without special tools
• Suitable for 1 "-12" standard flanges
• With stainless steel nameplate containing parameters and a flow arrow

Options

tee, nozzle, pressure gauge,excess flow valve, lifting bolts, special coating

Size & Specification of Holders

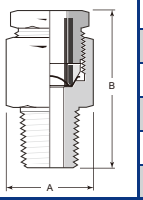
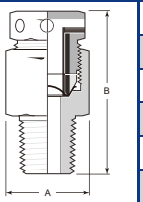
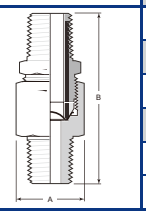
Size		Flange Class		Hight		O.D	Est. Weight
in	mm	ANSI	DIN	LJ mm	YJ mm	mm	Kg
1	25	150	10/16	46	46	62	0.8
		300/600	25/40			66	0.9
1/2	40	150	10/16	46	51	82	1.3
		300/600	25/40			88	1.6
2	50	150	10/16	46	51	96	1.8
		300/600	25/40			100	2.0
3	80	150	10/16	46	51	128	2.6
		300/600	25/40			132	2.9
4	100	150	10/16	46	56	152	3.0
		300/600	25/40			156	3.4
6	150	150	10/16	56	61	206	5.9
		300/600	25/40			216	7.5
8	200	150	10/16	61	66	256	8.3
		300/600	25/40			274	12.2
10	250	150	10/16	71	76	310	13.0
		300/600	25/40			330	19.0
12	300	150	10/16	76	81	372	18.2
		300/600	25/40			389	24.7
14	350	150	10/16	91	91	418	26.8
		300/600	25/40			448	41.5
16	400	150	10/16	106	106	489	45.3
		300/600	25/40			503	54.4
18	450	150	10/16	116	116	528	53.2
		300/600	25/40			548	68.7
20	500	150	10/16	121	121	584	60.2
		300/600	25/40			609	82.7
24	600	150	10/16	126	126	690	78.7
		300/600	25/40			720	112.0

Screw Type Rupture Disc

Screw-type rupture disc is disposable, to achieve the purpose of safe discharge through preassembly.

Technical features

• Applied in small pressure systems: air conditioning systems, chillers, hydraulic accumulators, gas cylinders, portable compressed air systems, high pressure cleaning systems and laboratory equipment.
• Other materials, rupture disc types and inlet/outlet types can be provided on requests
• Most OEM products can select from the three models listed below.

	Screw Holder Model	Connections		Hexagon bdt size	Height
		Inlet	Outlet		
	0200-00	1/8" MNPT	VTA	1-1/8"	1-3/8"
	0300-00	1/4" MNPT	VTA	1-1/8"	1-3/8"
	0400-00	3/8" MNPT	VTA	1-1/8"	1-3/8"
	0500-00	1/2" MNPT	VTA	1-1/8"	1-3/8"
	0600-00	3/4" MNPT	VTA	1-3/8"	1-9/16"
	0700-00	1" MNPT	VTA	1-3/4"	1-3/4"
	0201-00	1/8" MNPT	Muffled	1-1/8"	1-3/4"
	0301-00	1/4" MNPT	Muffled	1-1/8"	2"
	0401-00	3/8" MNPT	Muffled	1-1/8"	1-7/8"
	0501-00	1/2" MNPT	Muffled	1-1/8"	2"
	0601-00	3/4" MNPT	Muffled	1-3/8"	2-3/8"
	0701-00	1" MNPT	Muffled	1-3/4"	2-3/4"
	0202-00	1/8" MNPT	1/8" MNPT	1-1/8"	2-3/16"
	0302-00	1/4" MNPT	1/4" MNPT	1-1/8"	2-3/16"
	0402-00	3/8" MNPT	3/8" MNPT	1-1/8"	2-3/16"
	0502-00	1/2" MNPT	1/2" MNPT	1-1/8"	2-3/16"
	0602-00	3/4" MNPT	3/4" MNPT	1-3/8"	2-3/8"
	0702-00	1" MNPT	1" MNPT	1-3/4"	2-7/8"

Disc Model	Series	Bursting Pressure psig@72℉(22℃)				
		Min.				Max.
		Nickel	Monel	Inconel	316SS	All
LP	BLW1-	275	360	450	600	1000
LP-V	BLW2-	275	360	450	600	1000
LF*	BLW3-	60	90	90	90	1000
LF-V*	BLW4-	60	90	90	90	1000

Note: Manufacture range, tolerance and Max. Temperature refer to catalogue.
Standard Sealing Material: Teflon

Parameters:

Screw Holder Model: _____

Disc Model: _____

Material:

Rupture Disc

❑ Nickel ❑ Monel
❑ Inconel ❑ 316SS
❑ other_____

Screw Holder

❑ Brass
❑ other_____

Operating Pressure:

_____psig@ _____°F

Bursting Pressure:

_____psig@ _____°F

Quantity:

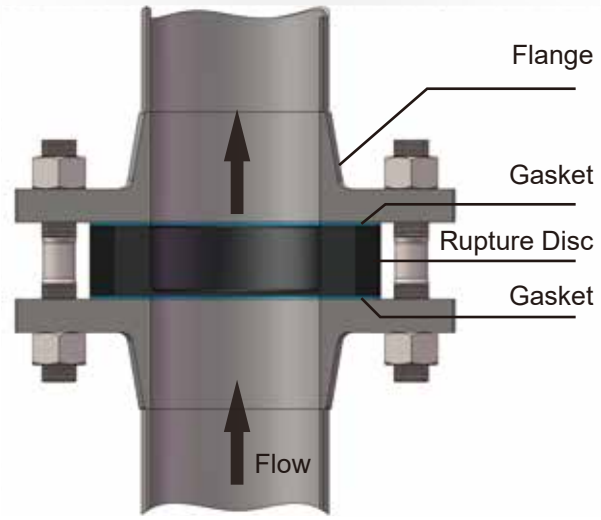
_____each /_____ pcs/yr

Graphite Rupture Disc/PM Series

Graphite rupture discs are made of resin-impregnated graphite for use in highly corrosive processes.

Technical features

- Size from 1" to 24"
- Burst Rating from 0.01to 10.3 barg
- Non-asbestos rubber gasket
- Suitable for liquid, gas, or two-phase applications
- Withstand high temperature up to 371 ℃ without heat insulation layer
- Operating ratios up to 80% of the low end of burst tolerance
- Standard manufacturing range:0%



Installation

Graphite rupture discs are mounted directly between standard flanges, requiring no holders.
Flow arrows are pointing in the correct direction.
The housing provides additional protection against external stress due to pipe dislocation.
Housing with selected diameter and burst pressure is necessary in fire and toxic environments.
The spacer ring is non-metallic and relatively soft.
When connecting flanges, ensure correct operation :

- Concentric alignment of rupture disc and gasket
- Evenly cross tighten flange bolts
- Adequate piping support to withstand external loads and thrust during blowdown
- Protect personnel and equipment from high speed discharge of process materials and fragments of discs

Burst Tolerance

GB 567-2012	
Rated Bust Pressure bar	Bust Tolerance
< 0.5	± 25%
≥ 0.5~ < 3	± 15%
≥ 3	± 10%

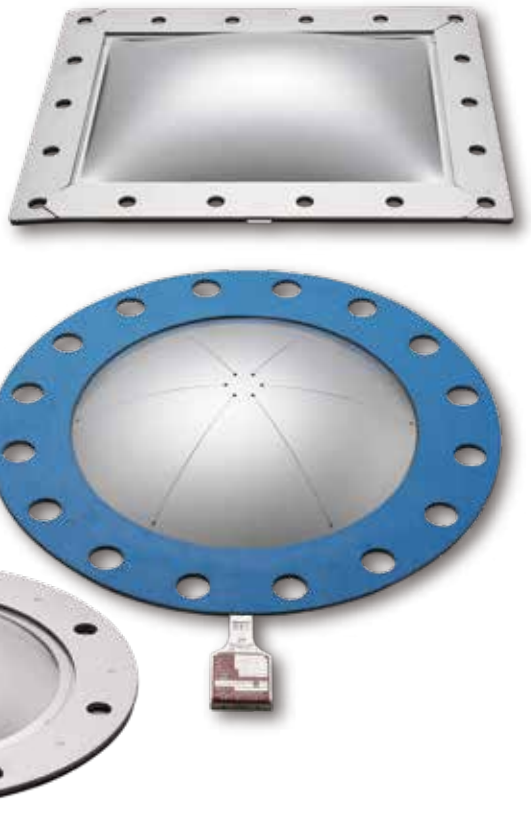
Note: Burst tolerances are the maximum expected variation from the disk's marked burst

Minimum and Maximum Burst Pressure Ratings - psig(barg)@72°F(22 ℃)

Disk Size		Burst Ratings			
NPS [in]	DN [mm]	psig		barg	
		min,	max,	min,	max,
1"	25	21.8	250	1.5	17
1¼"	32	17.4	250	1.2	17
1½"	40	14.5	250	1	17
2"	50	11.6	250	0.8	17
2½"	65	7.3	250	0.5	17
3"	80	7.3	250	0.5	17
4"	100	5.8	250	0.4	17
5"	125	5.8	170	0.4	12
6"	150	4.4	170	0.3	12
8"	200	4.4	170	0.3	12
10"	250	4.4	150	0.3	10
12"	300	2.9	150	0.2	10
14"	350	2.9	150	0.2	10
16"	400	2.2	150	0.15	10
18"	450	2.2	150	0.15	10
20"	500	2.2	150	0.15	10
24"	600	2.2	150	0.15	10
Max. Temp.		392°F (200°C)			

Explosion Vents

Explosion venting panel is the large size of LF Serie and PF Serie Rupture Discs, providing over-pressure relief to minimize structural or mechanical damage caused by expanding gases.

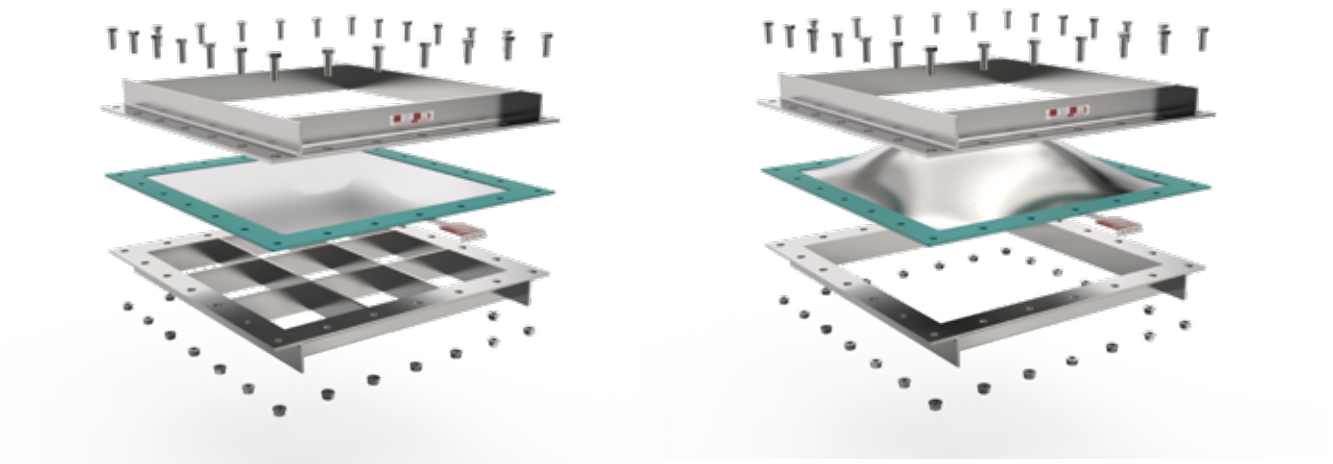


Technical Features

• Forward acting or flat slotted rupture disc with large size
• Sizes,shapes and materials can be customize on requests. Such as square, circle, trapezoid, semicircle, etc.;
• Standard materials: SS/TFE/SS. For special materials, please contact us.
• Standard bursting pressure: 0.1-1.00 barg;
• Operation ratio: PF - 50%, LF -80%;
• Install into standard flanges or simple clamps.

Options

• Bursting Sensor
• Insulation part
• Gasket



Explosion Vents Installation Instruction

Explosion Vent Size

Rectangle Explosion Vent/ Square Explosion Vent

Mominal Size		Inside Dimension		Outside Dimension		Net Relief Area	
Inches	mm	Inches	mm	Inches	mm	In.sq	cm.sq
9 X 12	230X305	9 X 12	230X305	13X16	330X406	98	630
12 X 18	305X457	12 X 18	305X457	16X22	406X559	201	1298
18 X 18	457X457	18 X 18	457X457	22X22	559X559	306	1976
18 X 24	457X610	18 X 24	457X610	22X28	559X711	411	2653
18 X 30	457X762	18 X 30	457X762	22X34	559X864	516	3330
18 X 36	457X915	18 X 36	457X915	22X40	119X1016	621	4008
24 X 24	610X610	24 X 24	610X610	28X28	711X711	552	3562
24 X 30	610X762	24 X 30	610X762	28X34	711X864	693	4473
24 X 36	610X915	24 X 36	610X915	28X40	711X1016	834	5382
24 X 44	610X1118	24 X 44	610X1118	28X48	711X1220	1022	6956
30 X 36	762X915	30 X 36	762X915	34X40	864X1016	1047	6756
30 X 40	762X1016	30 X 40	762X1016	34X44	864X1118	1165	7518
36 X 36	915X915	36 X 36	915X915	40X40	1016X1016	1260	8131
44 X 44	1118X1118	44 X 44	1118X1118	48X48	1220X1220	1892	12208

Round Explosion Vent

Mominal Size		Inside Dimension		Outside Dimension		Net Relief Area	
Inches	mm	Inches	mm	Inches	mm	In.sq	cm.sq
8	200	8.5	216	13.5	343	43	277
10	250	10.5	267	16	406	69	444
12	300	12.5	318	19	483	101	651
14	350	13.5	343	21	533	126	813
16	400	16.25	413	19.75	502	192	1236
18	450	18.25	464	21.75	552	243	1568
20	500	20.25	514	23.75	603	301	1939
24	600	24.25	616	27.75	705	434	2799
30	750	30.25	768	34.25	870	680	4385
32	800	32.25	819	36.25	921	774	4992
36	900	40.25	1022	40.25	1022	980	6325
40	1000	44.25	1124	44.25	1124	1211	7815
44	1100	48.25	1226	48.25	1226	1467	9462

Contact for more sizes.

Special Explosion Vent

Boiler flue bursting disc is derived on the basis of explosion venting panel.This composite bursting disc can be used for high temperature application , as the sealing film is made of heat-resistant metal materials (such as aluminum, nickel, etc.)

Technical features

• Forward acting slotted rupture disc
• Refer to explosion venting panels for standard sizes (customized sizes are available)
• Standard materials: stainless steel/aluminum/stainless steel
• The standard bursting pressure is 0.2barg, while pressures from 0.1 to 1barg are available on requests.
• Mount to standard flanges or connectors
• Operating ratio: 80%

Options

•Burst Indicator
•Gasket

	Relieving Pressure	Tolerance
Burst Pressure Tolerance	0.01-0.1 barg	±0.017 barg
	0.1-1 barg	±0.034 barg

Flameless Explosion Venting Device

It is mainly used for the protection of dust explosions and it can effectively prevent the huge loss caused by dust secondary explosions. Flameless relief device can be used for the protection of indoor or outdoor dust explosion, without other operating costs, easy installation, and no pressure relief pipe is needed. It shall at least consist of a bursting plate and fire resisting components.

Working Principle

When an explosion occurs, the bursting plate opens and the flame passes through the mesh flame-blocking components, the flame-blocking components and the flame exchange heat, quickly cooling the high-temperature flame, releasing pressure and fumes to ensure that the flame is not spread, stop it from secondary explosion or multiple explosions, at the same time, the pressure waves or noise generated by the explosion will be

Technical Features

Material: carbon steel shell + stainless steel mesh
Square,rectangular and roumd configurations are available
Burst ratings from 01 thru 1barg
Mount into standard flanges

Options

Intergral burst indicator
Gaskets

	Relieving Pressure	Tolerance
Burst Pressure Tolerance	0.01-0.1 barg	±0.017 barg
	0.1-1 barg	±0.034 barg

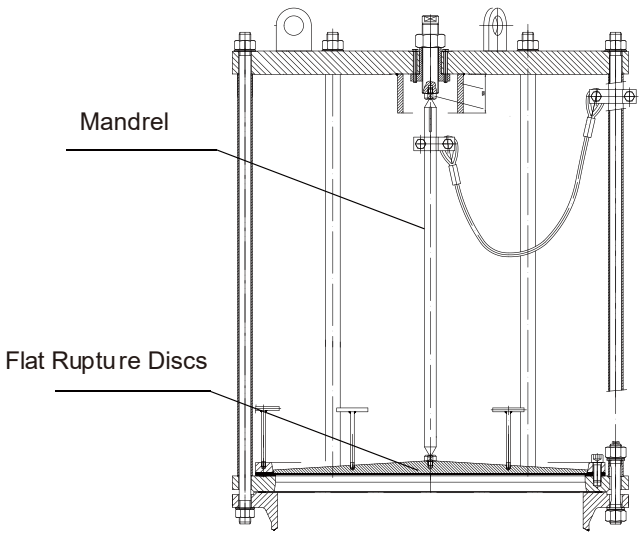
Buckling Rod Rupture Disc/DG series

Burst pressure of rupture disc is accurately controlled by the buckling pressure of the buckling rod.

Technical features

- Large discharge area
- Low bursting pressure can be set
- suitable for high temperature
- standard materials: stainless steel, aluminum,non asbestos
- size: 400-1000mm
- Suitable for gas, liquid service or two-phase flow service

* Buckling rod rupture disc is tailored to the needs of phthalic anhydride industry



Special Purpose Rupture Disc

Special bursting disc is suitable for all kinds of gas cylinders, low temperature storage tanks, mobile tank vehicles, extrusion machines, refrigerating machines, oil pipelines and power industry equipment.

Special rupture disc for power industry equipment

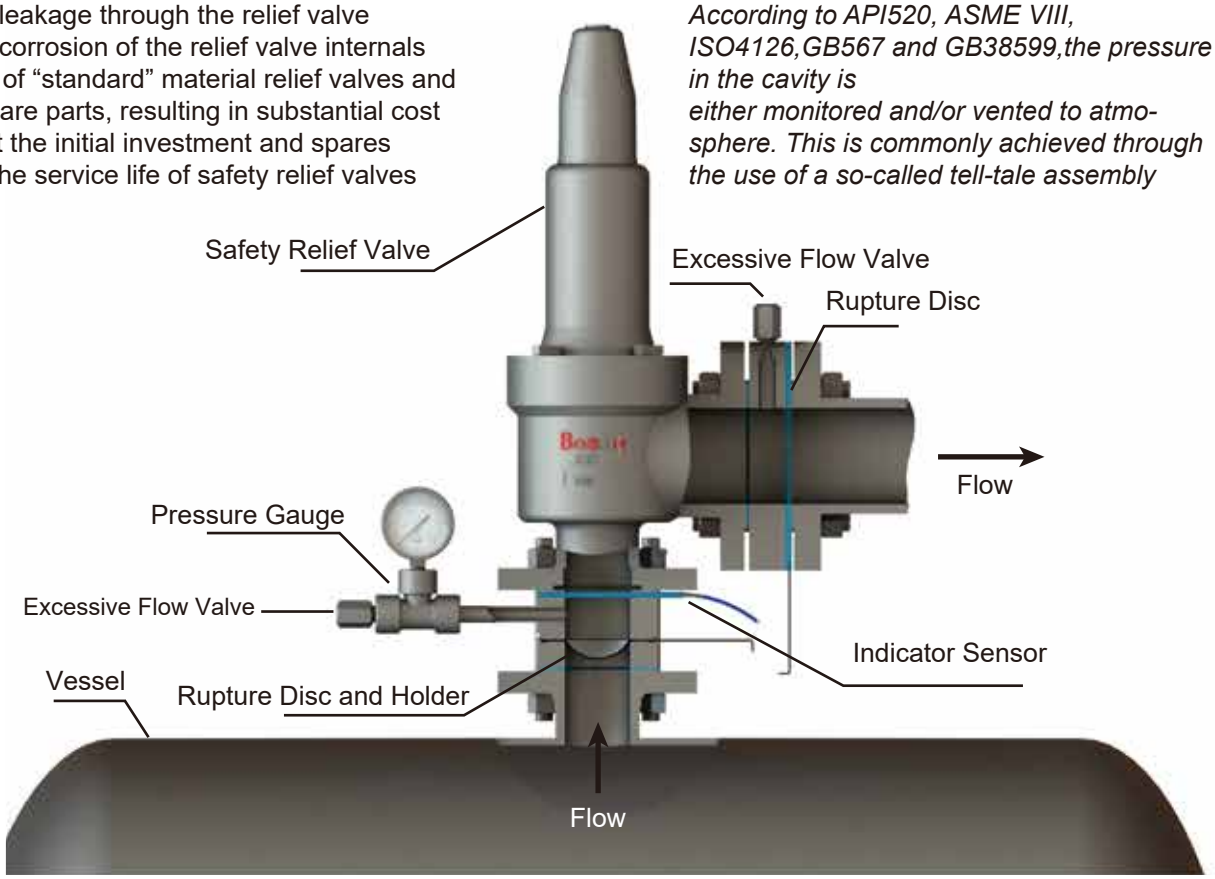
- Fully enclosed combination electrical switch cabinet GIS
- High voltage switch C-GIS
- Mutual inductor and lightning conductor

Rupture Disc in Series with Safety Valve

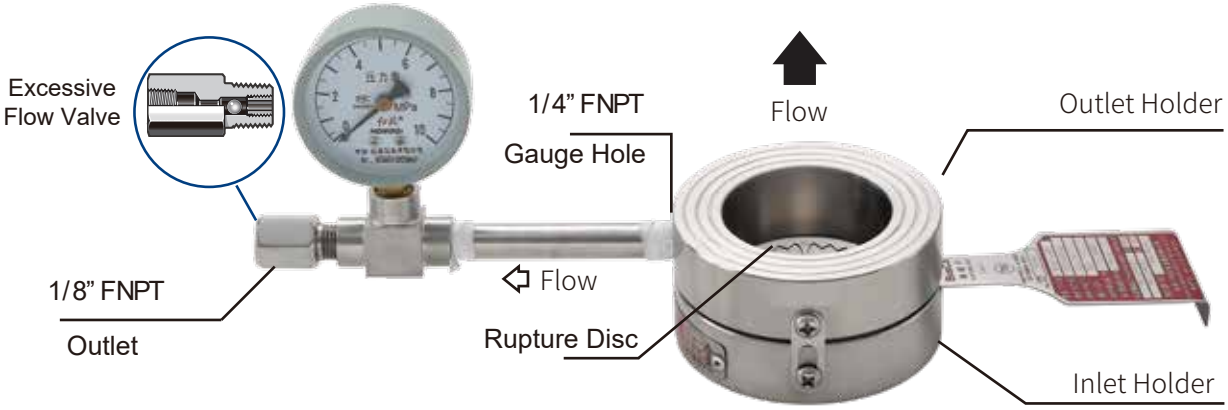
Technical features

• Prevent leakage through the relief valve
• Prevent corrosion of the relief valve internals
• The use of “standard” material relief valves and related spare parts, resulting in substantial cost savings at the initial investment and spares
• Extend the service life of safety relief valves

According to API520, ASME VIII, ISO4126,GB567 and GB38599,the pressure in the cavity is either monitored and/or vented to atmosphere. This is commonly achieved through the use of a so-called tell-tale assembly



Rupture Disc and Holder Accessory



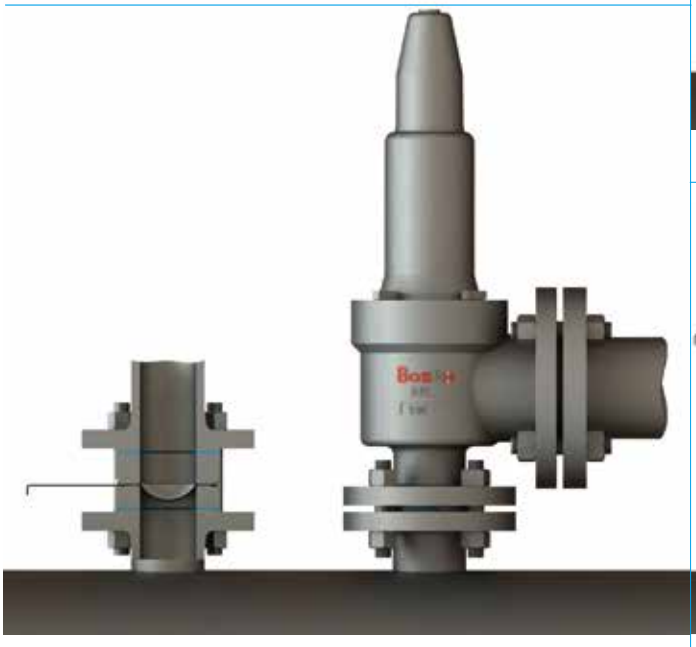
Accessory kit

used to monitor the space between a rupture disc and safety relief valve or the presence of back-pressure in a header system

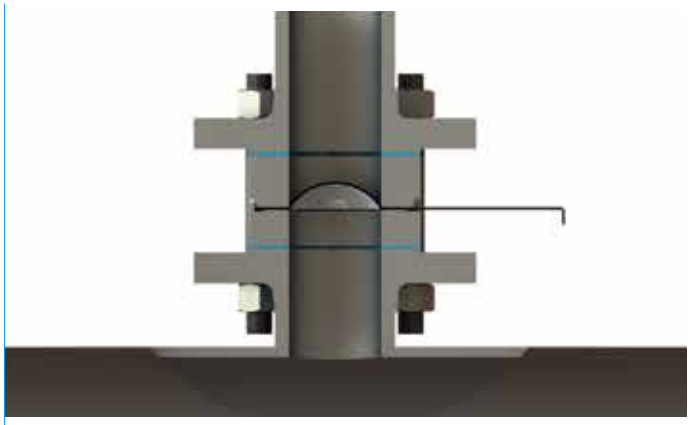
Installation of Rupture Discs

The features of the rupture disc and the safety relief valve are different. Depending on the equipment to be protected and required performance, using rupture discs in combination with relief valves can offer the best solution. Such combinations can be either in parallel or in series.

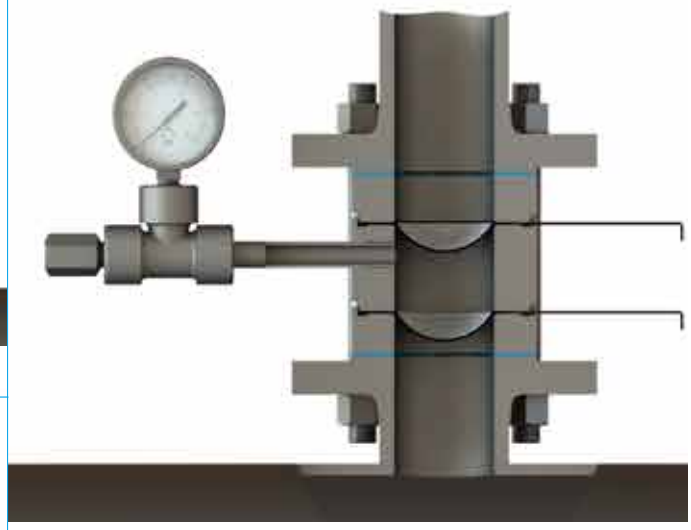
In series use with Safety Relief Valve



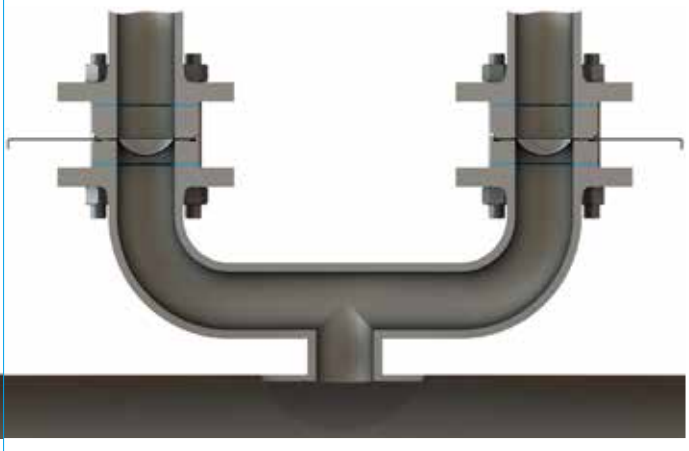
Parallel with Safety Relief Valve



Separate Installation



2 Rupture Discs In series use with Safety Relief Valve



Rupture Discs switch

Burst Sensor/BI series

BI series indicator is a simple and effective alarm device, which can be widely used in most occasions.

Principle

The BI series alarm indicator is installed at the vent side of the rupture disc assembly or the vent side of the safety valve. when the process media ruptures a disk or opens a safety relief valve,The BI indicator will send out an

Over pressure or discharge indicator for rupture Disc and relief valve applications

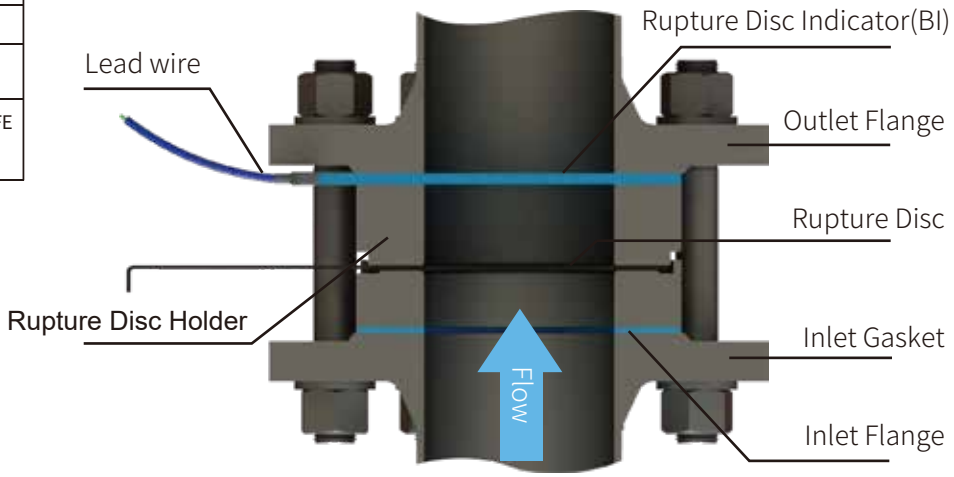
Technical features

- Low cost of use
- Size: 1" -24"
- Compatible with Metal or Graphite Rupture Discs or for relief valve applications
- Minimize downtime due to immediate burst indication
- Can be installed in a standard piping without a holder

Materials

Gaskets	Compressed fiber
Membrane	PI
Conductive material	Silver Copper
Leadwire	6 foot, 24 AWG, 2 conductor PTFE sheathed leadwire (cable)

Typical Installation



BI Operating Limits

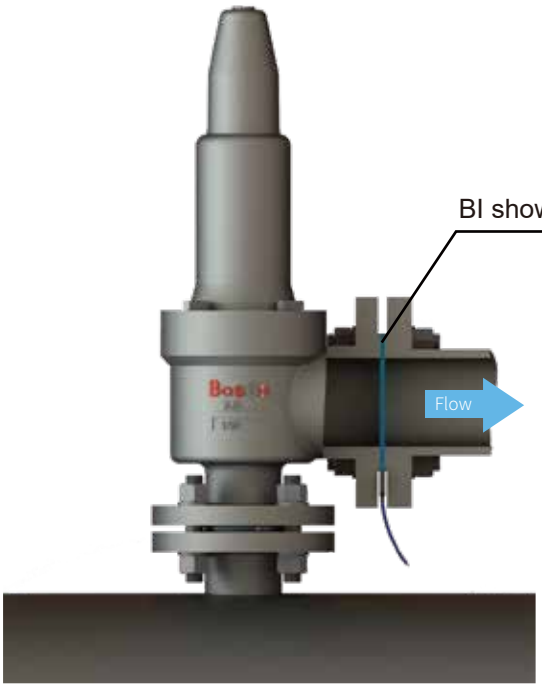
Max. Voltage	24 VDC
Max. Current	150 mA
Temp. Range	-40 至 +200℃ -40 to +392°F

Specifications

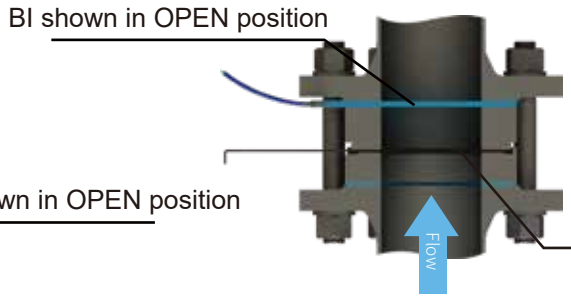
Disc Size	Minimum Burst Pressure psig @ 72°F (22°C)	Nominal Indicator Thickness
1〃-2〃	5	4mm 3/16〃
3〃	3	
4〃	2	
6〃-24〃	1	

Ordering Information： When ordering BI, specify: flange size, flange series, relieving pressure of pressure relief device, and coincident temperature.

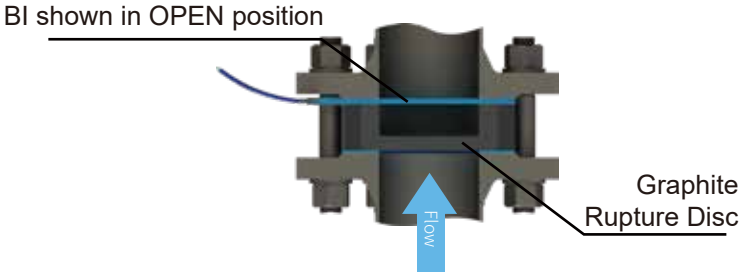
Rupture Disc and Relief Valve Applications



Relief Valve with BI



BI installed with Metal Rupture Disc



BI installed with Graphite Rupture Disc

Naming and Selection of Rupture Disc

Type of Rupture disc

	Forward acting Conventional	Forward acting slotted	Forward acting scored	Flat slotted	Flat scored
Type of Rupture disc	LP	LF	LC	PF	PC
Holder type	LJ	LJ	LJ	PJ	PJ

Rupture disc type

YC — — —

Type/Seal Face | Size | Burst pressure | Temperature | Material

Sealing surface:
A-flat seal
B-cone seal
C-tongue and groove
D-line face seal

Size:
Stangard in mm

Burst pressure:
in MPa

Temperature:
in the unit °C

Material
Material:
SS-304 or 316L
L-316L
HC-Hastelloy
Ni-Pure Nickel
M-Monel
In-Inconel
SP-Special

Naming and Selection of Rupture Disc

Type of Rupture disc

	Flat graphite	Reverse acting with knife	Reverse acting with sawteeth	Reverse acting slotted	Reverse acting scored
Type of Rupture disc	PM	YD	YE	YF	YC
Holder type	/	YDJ	YJ	YJ	YJ

Holder Type

YJ | | | |

Type/Seal Face | Size | External Diameter | Material

Sealing surface:
A-flat seal
B-cone seal
C-tongue and groove
D-line face seal

Size:
Stangard in mm

External Diameter:
Stangard in mm

Material:
SS-304 or 316L
Al-Aluminium
HC-Hastelloy
Ni-Pure Nickel
M-Monel
In-Inconel
SP-Special

Final Notes

This document provides the approved drawings, layouts, and dimensions of the unit. For any additional technical information or services, please contact [ChloroMaster].