

Welded Cassettes

Rupture disk and safety head integrated into a one-piece design.

This customized ready-to-install design simplifies installation and assures leak tightness with its welded construction.

- LPS-W
- S90-W
- XT-W

US Patent 9,810,333 applies and international patents pending.

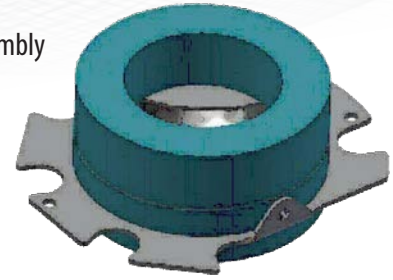
WELDED CASSETTE PRODUCT FEATURES:

- Certified device – ready to use
- Intrinsically leak tight
- Designed for non-fragmentation
- Fast simplified installation
- Flange compatibility
 - Multi-rating (use of 'Flange Adapter Ring' patented design)
 - Self centering
- Torque insensitive
- Ease of installation – no rupture disk handling
- Disk dome contained within cassette (before activation)
- Product Certification:
 - CE/PED [2014/68/EU]
 - ASME
- Product Options:
 - NPT tapping available in outlet
 - Tell-tale assembly compatible
 - Burst Alert Sensor
- Product Marking on Assembly Sidewall
 - Lot Number for identification and traceability
 - Burst Pressure and Material Information
 - ASME and / or CE stamp (if required)
- Standard Materials of Construction
 - Inlet/outlet/ Hinge Flange Adapter Ring 300 Series SS
 - Disk Options: 316SS, Nickel, Inconel
 - Other materials available upon request
- Manufacturing Design Ranges: 0%, -5%, -10%
- Above features apply to LPS-W, S90-W, and XT-W

LPS-W™ Low Pressure Reverse Buckling

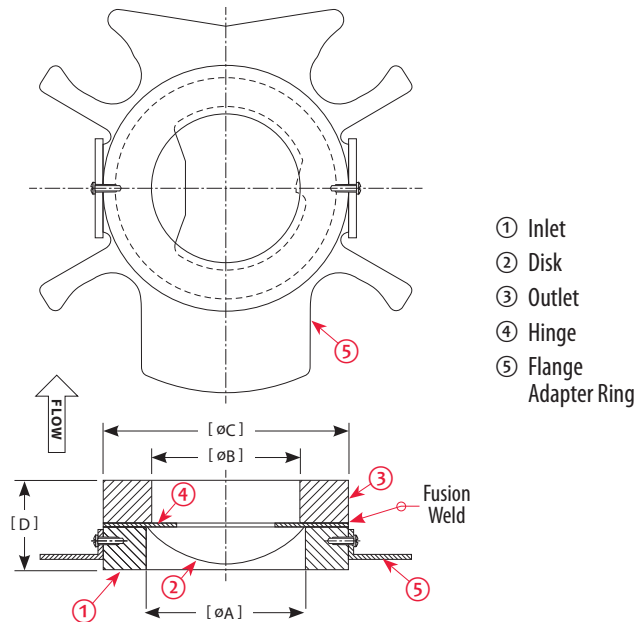
Disk Welded Cassette

The LPS-W rupture disk assembly provides low burst pressures from 5 psig (0.35 barg) using reverse buckling rupture disk technology.



FEATURES

- Solid metal design
- Low burst pressure from 5 psig (0.35 barg)
- Designed for gas, liquid or two phase service
- Fail safe: damage safety ratio < 1
- Designed for non-fragmentation
- Vacuum and back pressure resistant
- High operating ratio: 95% of minimum burst pressure
- Reverse buckling disk assembly in sizes: 1-6 inches (25-150 mm)
- Flow resistance factors Krg 0.79 and Krl 0.86



- ① Inlet
- ② Disk
- ③ Outlet
- ④ Hinge
- ⑤ Flange Adapter Ring

LPS-W Burst Tolerance

Marked Burst Pressure	Burst Tolerance
≤ 40 psig (2.76 barg)	± 2 psig (0.138 barg)
> 40 psig (2.76 barg)	± 5%

A reduced burst tolerance is available upon request.

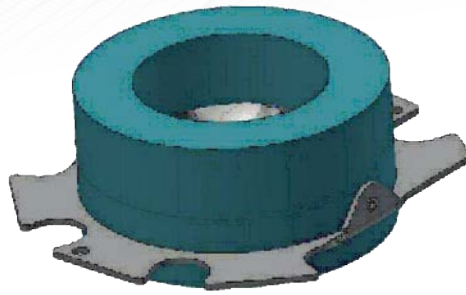
The proprietary shape of the Flange Adapter Ring ensures a well centered fit between typical companion flanges. Actual shape varies.

LPS-W Flow Performance

Size		MNFA	NRA
in	mm	(in2)	(cm2)
1	25	0.86	4.9
1.5	40	1.93	11.3
2	50	3.36	19.7
3	80	7.39	40.8
4	100	12.74	69.7
6	150	28.89	158.6

LPS-W™ Disk Specifications Minimum / Maximum Pressure Rating at 72°F (22°C) & Assembly Dimensions

Size		Burst Pressures				[ØA]	[ØB]	[ØC]	[D]	ASME	EN	JIS	BS
in	mm	psig		barg									
		min	max	min	max								
1	25	15	70	1.03	4.82	[35]	[31]	[56.9]	[42]	150/300/600	10/16/25/40	10/16/20/30/40	10
1.5	40	6	55	0.41	3.79	[48]	[43.5]	[76]	[46]	150/300/600	10/16/25/40	10/16/20/30/40	10
2	50	5	40	0.34	2.76	[63.5]	[59]	[95]	[50]	150/300/600	10/16/25/40	10/16/20/30/40	-
3	80	5	35	0.34	2.41	[89]	[84.6]	[126.75]	[58]	150/300/600	10/16/25/40	16/20/30/40	-
4	100	5	30	0.34	2.07	[114.5]	[110]	[162]	[74]	150	10/16/25/40	10	-
6	150	5	25	0.34	1.72	[165.3]	[161]	[215.5]	[96]	150	10/16/25/40	10	-



S90-W™ Precision Cross-Scored Reverse Buckling Rupture Disk Welded Cassette

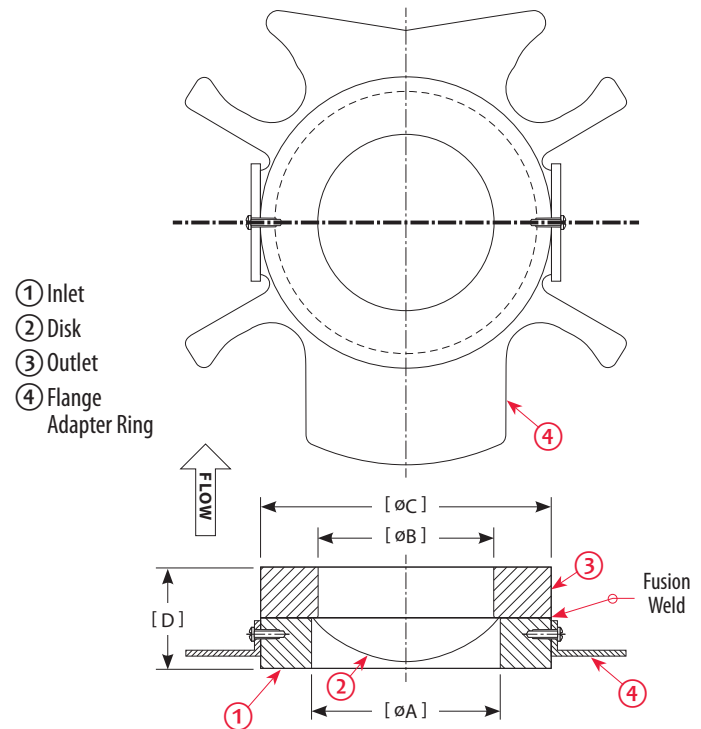
The S90-W is a domed, solid metal, precision scored reverse buckling disk assembly, which, upon over-pressure, reverses and opens along pre-weakened cross-score lines to provide a full relief opening. The compression loaded S90-W disk offers an extended service life under pressure cycling conditions. The S90-W disk exhibits excellent fatigue resistance in cyclic pressure service.

FEATURES

- Solid Metal Design
- Designed for non-fragmentation
- Withstands full vacuum and back pressure equal to or less than burst pressure (higher upon request)
- Suitable for operating pressure to 90% of the marked burst pressure/and 95% of the minimum burst pressure
- Gas service (acceptable for liquid service with a compressible gas vapor pocket between the liquid and disk)
- Damage safety ratio 1.5. An S90-W disk assembly that is damaged or installed incorrectly will burst at or below 1.5 times its marked burst pressure
- Reversal safety ratio equal to or less than 1.5. An S90-W assembly installed upside down in the pressure system will burst at 1.5 times its marked burst pressure or less
- Optimum fatigue resistance in pressure pulsating or cycling conditions
- Ideal for safety relief valve isolation
- Flow resistance factor K_{rg} 1.13

S90-W Burst Tolerance

Marked Burst Pressure	Burst Tolerance
< 40 psig (2.76 barg)	+ 2 psig (0.138 barg)
> 40 psig (2.76 barg)	+ 5%



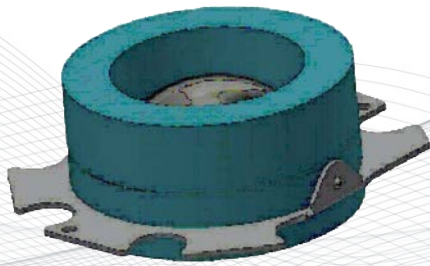
The proprietary shape of the Flange Adapter Ring ensures a well centered fit between typical companion flanges.

S90-W Flow Performance

Size		MNFA	NRA
in	mm	(in ²)	(cm ²)
1	25	0.86	5.54
1.5	40	2.03	13.0
2	50	3.36	21.6
3	80	7.39	47.6
4	100	12.7	81.9
6	150	28.8	185

S90-W™ Disk Specifications Minimum / Maximum Pressure Rating at 72°F (22°C) & Assembly Dimensions

Size		Burst Pressures				[ØA]	[ØB]	[ØC]	[D]	ASME	EN	JIS	BS
in	mm	psig		barg									
		min	max	Min	Max								
1	25	125	1000	8.62	68.9	[35]	[31]	[56.9]	[40]	150 / 300 / 600	10 / 16 / 25 / 40	10 / 16 / 20 / 30 / 40	10
1.5	40	90	1000	6.21	68.9	[48]	[43.5]	[76]	[44]	150 / 300 / 600	10 / 16 / 25 / 40	10 / 16 / 20 / 30 / 40	10
2	50	75	1000	5.17	68.9	[63.5]	[59]	[95]	[48]	150 / 300 / 600	10 / 16 / 25 / 40	10 / 16 / 20 / 30 / 40	-
3	80	65	1000	4.14	68.9	[89]	[84.6]	[126.75]	[56]	150 / 300 / 600	10 / 16 / 25 / 40	16 / 20 / 30 / 40	-
4	100	50	800	3.45	55.2	[114.5]	[110]	[162]	[72]	150	10 / 16 / 25 / 40	10	-
6	150	55	725	3.76	50	[165.3]	[161]	[215.5]	[94]	150	10 / 16 / 25 / 40	10	-



XT-W Burst Tolerance

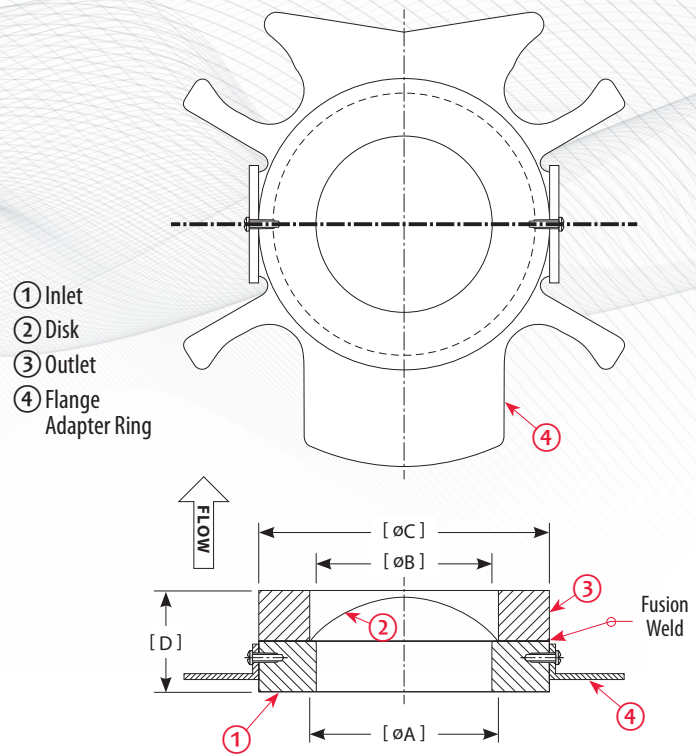
Marked Burst Pressure	Burst Tolerance
≤ 40 psig (2.76 barg)	± 2 psig (0.138 barg)
> 40 psig (2.76 barg)	± 5%

Type XT-W™ Forward Acting, Tension Loaded Rupture Disk

The XT-W provides advanced rupture disk performance from a forward acting, tension loaded design. This creates a minimally stressed score pattern offering optimum service life and an extended operating pressure limit of 85% of marked burst pressure or 90% of minimum burst pressure, even under cyclic conditions.

FEATURES

- Solid metal construction
- X' shaped score pattern – designed for non-fragmentation & excellent for relief valve isolation
- Smooth disk surface on process side – resistant to product accumulation
- Designed for gas service or liquid service
- High flow capacity/low flow resistance: Krg and Krl of 0.5 and high flow area in all sizes
- Fail safe damage safety ratio < 1
- Vacuum resistant; no additional support required



The proprietary shape of the Flange Adapter Ring ensures a well centered fit between typical companion flanges. Actual shape varies according to nominal size.

XT-W Flow Performance

Size		MNFA	NRA
in	mm	(in ²)	(cm ²)
1	25	0.86	5.54
1.5	40	2.03	13.0
2	50	3.36	21.6
3	80	7.39	47.6
4	100	12.7	81.9
6	150	28.8	185

XT-W Disk Specifications Minimum / Maximum Pressure Rating at 72°F (22°C) & Assembly Dimensions

Size		Burst Pressures				[ØA]	[ØB]	[ØC]	[D]	ASME	EN	JIS	BS
in	mm	psig		barg									
		min	max	min	max								
1	25	165	1000	11.00	68.90	[31]	[35]	[56.9]	[40]	150/300/600	10/16/25/40	10/16/20/30/40	10
1.5	40	115	1000	8.00	68.90	[43.5]	[43.5]	[76]	[44]	150/300/600	10/16/25/40	10/16/20/30/40	10
2	50	105	1000	7.00	68.90	[59]	[63.5]	[95]	[48]	150/300/600	10/16/25/40	10/16/20/30/40	-
3	60	90	1000	6.00	68.90	[84.6]	[89]	[126.75]	[56]	150/300/600	10/16/25/40	16 / 20 / 30 / 40	-
4	100	90	800	6.00	55.20	[110]	[114.5]	[162]	[72]	150	10/16/25/40	10	-
6	150	90	725	6.00	50	[161]	[165.3]	[215.5]	[90]	150	10/16/25/40	10	-



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