



STD

STANDARD

The STD is Oseco's original rupture disc tension-loaded and economical

- **Standard sizes: 1/2"-24"**
Consult Oseco for other available sizes
- **Standard materials: 316 Series Stainless Steel, Nickel, Inconel® 600, Monel® and Aluminum**
- **Pressure ranges from 2 psig to 30,000 psig; special applications may require reduced pressure ranges. Please consult the Oseco factory**
- **Vacuum service: If the STD is subjected to vacuum conditions, it may be necessary to use a vacuum support with the STD disc. The STDV (STD with vacuum support) is designed to withstand a minimum 15 psig of differential back-pressures on request. If the burst pressure is high enough, vacuum supports are not required**
- **ASME Approved**

STD

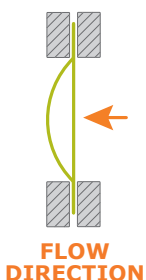
Oseco's STD rupture disc is a pressure-relieving safety device that is used in many applications. It has a 30° angular seating area and is used primarily to vent to controlled areas or to the atmosphere.

The disc is designed for operation in applications where normal system pressures do not exceed 70% of the stamped burst pressure. This will ensure long and excellent service life.

It is a solid metal crowned or pre-bulged disc and is designed for a wide variety of applications.

The STD excels in gas or liquid applications and a variety of temperature and pressure extremes.

The disc comes in a wide variety of materials and sizes. Liners are made primarily of PFA fluoropolymer; consult the Oseco factory for specifics regarding your particular application.



COMMON APPLICATIONS

High burst pressure applications

OPERATING RATIO

70%

BURST TOLERANCE

±5% over 40 psig
±2 psig from 2-40 psig

MANUFACTURING RANGE

See Chart

oseco pressure intelligence

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STD Minimum / Maximum Burst Pressure For STD Rupture Discs @ 72° F (psig) / 22° C (barg)

Disc Size (Inches)			METAL					METAL WITH FLUOROPOLYMER ON 1 SIDE					METAL WITH FLUOROPOLYMER ON 2 SIDES				
			316	Ni	Mo	Inc	Al	316 FP*	Ni FP*	Mo FP*	Inc FP*	Al FP*	316 FP*	Ni FP*	Mo FP*	Inc FP*	Al FP*
1/2 0.5	MIN	psig barg	625 43.1	280 19.3	340 23.4	440 30.3	80 5.5	820 56.5	500 34.5	500 34.5	790 54.5	235 16.2	910 62.7	600 41.4	600 41.4	790 54.5	380 26.2
	MAX	psig barg	30,000 2,068.4	20,000 1,378.9	25,000 1,723.7	30,000 2,068.4	1,500 103.4	10,000 689.5	6,000 413.7	6,000 413.7	10,000 689.5	1,500 103.4	10,000 689.5	6,000 413.7	6,000 413.7	10,000 689.5	1,500 103.4
11/16 0.6875	MIN	psig barg	455 31.4	200 13.8	250 17.2	325 22.4	55 3.8	650 44.8	370 25.5	420 29.0	500 34.5	225 15.5	740 51.0	460 31.7	510 35.2	590 40.7	315 21.7
	MAX	psig barg	1,000 68.9	1,000 68.9	1,000 68.9	1,000 68.9	650 44.8	1,000 68.9	1,000 68.9	1,000 68.9	1,000 68.9	650 44.8	1,000 68.9	1,000 68.9	1,000 68.9	1,000 68.9	650 44.8
1 DN 25	MIN	psig barg	320 22.1	145 10.0	175 12.1	225 15.5	40 2.8	370 25.5	195 13.4	225 15.5	275 19.0	90 6.2	420 29.0	245 16.9	275 19.0	325 22.4	140 9.7
	MAX	psig barg	12,000 827.4	8,000 551.6	10,000 689.5	12,000 827.4	1,000 68.9	5,000 344.7	3,000 206.8	3,000 206.8	5,000 344.7	1,000 68.9	5,000 344.7	3,000 206.8	3,000 206.8	5,000 344.7	1,000 68.9
1-1/2 DN 40	MIN	psig barg	210 14.5	95 6.5	115 7.9	150 10.3	26 1.8	245 16.9	130 9.0	150 10.3	185 12.8	60 4.1	280 19.3	165 11.4	185 12.8	220 15.2	95 6.5
	MAX	psig barg	6,000 413.7	6,000 413.7	6,000 413.7	6,000 413.7	750 51.7	3,400 234.4	2,000 137.9	2,000 137.9	3,400 234.4	700 48.3	3,400 234.4	2,000 137.9	2,000 137.9	3,400 234.4	700 48.3
2 DN 50	MIN	psig barg	120 8.3	55 3.8	67 4.6	87 6.0	16 1.1	145 10.0	79 5.4	91 6.3	110 7.6	40 2.8	170 11.7	105 7.2	115 7.9	135 9.3	64 4.4
	MAX	psig barg	6,000 413.7	4,000 275.8	4,500 310.3	6,000 413.7	570 39.3	1,800 124.1	1,300 89.6	1,300 89.6	1,800 124.1	500 34.5	1,800 124.1	1,300 89.6	1,300 89.6	1,800 124.1	500 34.5
3 DN 80	MIN	psig barg	90 6.2	41 2.8	49 3.4	63 4.3	12 0.8	105 7.2	55 3.8	63 4.3	77 5.3	26 1.8	120 8.3	69 4.8	77 5.3	91 6.3	40 2.8
	MAX	psig barg	6,000 413.7	2,500 172.4	3,200 220.6	4,000 275.8	460 31.7	1,500 103.4	900 62.1	900 62.1	1,500 103.4	400 27.6	1,500 103.4	900 62.1	900 62.1	1,500 103.4	400 27.6
4 DN 100	MIN	psig barg	68 4.7	31 2.1	37 2.6	48 3.3	9 0.6	79 5.4	42 2.9	48 3.3	59 4.1	20 1.4	90 6.2	53 3.7	59 4.1	70 4.8	31 2.1
	MAX	psig barg	6,000 413.7	1,900 131.0	2,400 165.5	3,000 206.8	360 24.8	1,100 75.8	650 44.8	650 44.8	1,100 75.8	325 22.4	1,100 75.8	650 44.8	650 44.8	1,100 75.8	325 22.4
6 DN 150	MIN	psig barg	51 3.5	23 1.6	28 1.9	36 2.5	7 0.5	59 4.1	31 2.1	36 2.5	44 3.0	15 1.0	67 4.6	39 2.7	44 3.0	52 3.6	23 1.6
	MAX	psig barg	3,600 248.2	1,400 96.5	1,800 124.1	2,200 151.7	275 19.0	800 55.2	500 34.5	500 34.5	800 55.2	240 16.5	800 55.2	500 34.5	500 34.5	800 55.2	240 16.5
8 DN 200	MIN	psig barg	40 2.8	18 1.2	22 1.5	28 1.9	5 0.3	46 3.2	24 1.7	28 1.9	34 2.3	11 0.8	52 3.6	30 2.1	34 2.3	40 2.8	17 1.2
	MAX	psig barg	2,100 144.8	1,100 75.8	1,450 100.0	1,700 117.2	205 14.1	600 41.4	375 25.9	375 25.9	600 41.4	180 12.4	600 41.4	375 25.9	375 25.9	600 41.4	180 12.4
10 DN 250	MIN	psig barg	30 2.1	14 1.0	17 1.2	22 1.5	4 0.3	35 2.4	19 1.3	22 1.5	27 1.9	9 0.6	40 2.8	24 1.7	27 1.9	32 2.2	14 1.0
	MAX	psig barg	1,400 96.5	800 55.2	1,150 79.3	1,400 96.5	165 11.4	500 34.5	300 20.7	300 20.7	500 34.5	135 9.3	500 34.5	300 20.7	300 20.7	500 34.5	135 9.3
12 DN 300	MIN	psig barg	27 1.9	12 0.8	15 1.0	19 1.3	4 0.3	31 2.1	16 1.1	19 1.3	23 1.6	8 0.6	35 2.4	20 1.4	23 1.6	27 1.9	12 0.8
	MAX	psig barg	1,000 68.9	670 46.2	960 66.2	1,000 68.9	140 9.7	400 27.6	250 17.2	250 17.2	400 27.6	110 7.6	400 27.6	250 17.2	250 17.2	400 27.6	110 7.6
14 DN 350	MIN	psig barg	23 1.6	11 0.8	13 0.9	17 1.2	3 0.2	-	-	-	-	-	-	-	-	-	-
	MAX	psig barg	750 51.7	570 39.3	750 51.7	725 50.0	125 8.6	-	-	-	-	-	-	-	-	-	-
16 DN 400	MIN	psig barg	20 1.4	9 0.6	11 0.8	15 1.0	3 0.2	-	-	-	-	-	-	-	-	-	-
	MAX	psig barg	500 34.5	410 28.3	500 34.5	500 34.5	105 7.2	-	-	-	-	-	-	-	-	-	-
18 DN 450	MIN	psig barg	18 1.2	8 0.60	9 0.7	12 0.9	2 0.2	-	-	-	-	-	-	-	-	-	-
	MAX	psig barg	475 32.7	445 30.7	475 32.7	475 32.7	95 6.5	-	-	-	-	-	-	-	-	-	-
20 DN 500	MIN	psig barg	16 1.1	8 0.6	9 0.6	12 0.8	2 0.1	-	-	-	-	-	-	-	-	-	-
	MAX	psig barg	450 31.0	400 27.6	450 31.0	450 31.0	85 5.9	-	-	-	-	-	-	-	-	-	-
24 DN 600	MIN	psig barg	44 3.0	37 2.6	55 3.8	45 3.1	2 0.1	-	-	-	-	-	-	-	-	-	-
	MAX	psig barg	230 15.9	145 10.0	450 31.0	230 15.9	71 4.9	-	-	-	-	-	-	-	-	-	-
Maximum Temp		° F ° C	900 482.2	750 398.9	800 426.7	900 482.2	250 121.1	500 260.0	500 260.0	500 260.0	500 260.0	250 121.1	500 260.0	500 260.0	500 260.0	500 260.0	250 121.1

Burst Tolerance

±2 psig from 3 to 40 psig	±5% above 40 psig
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Angular Seat STD Rupture Disc Vacuum Support Requirements

Disc Material	Full Vacuum	2/3-Vacuum	1/2-Vacuum
Nickel	1200 psig	975 psig	725 psig
Inconel 600	1200 psig	975 psig	725 psig
Monel	1200 psig	975 psig	725 psig
Hastelloy C	1200 psig	975 psig	725 psig
316 Stainless Steel	1200 psig	975 psig	725 psig
Aluminum	450 psig	360 psig	270 psig

If the burst pressure of a rupture disc at operating temperature is below these minimum pressures, a vacuum support is required. For back pressures greater than 14.7 psi and other disc metals, consult factory.

Standard Manufacturing Ranges For STD Rupture Discs

Specified Rupture Pressure		Manufacturing Range %
PSIG @ 72° F	BARG @ 22° C	
3 – 6	.21 – .41	+40 to –20
7 – 10	.48 – .69	+30 to –15
11 – 15	.76 – 1.0	+20 to –10
16 – 25	1.1 – 1.7	+16 to –8
26 – 45	1.8 – 3.1	+14 to –7
46 – 90	3.2 – 6.2	+12 to –6
91 – 270	6.3 – 18.6	+10 to –5
271 – 500	18.7 – 34.5	+8 to –4
501 – Up	34.5 – Up	+6 to –3

Free Flow Area/Minimum Net Flow Area (MNFA)

Disc Size (Inch)	Net Flow Area (Sq. In.)
0.25	0.049
0.5	0.19
0.75	0.44
1	0.6
1.5	1.48
2	2.85
3	5.41
4	10.3
6	22.6
8	45.6
10	72.7
12	101
14	135
16	176
18	230
20	279
24	415

Related products

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Let us help you with all your pressure relief questions. Contact Oseco at **800-395-3475** or email us at info@oseco.com.

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