

STD

STANDARD RUPTURE DISC

The OsecoElfab Standard Rupture disc is a forward acting disc commonly used in high-pressure, small-diameter applications.



The STD rupture disc is a simple, forward acting pressure relief device that offers an economical solution for a wide range of applications. The solid metal crowned or pre-bulged disc excels in gas or liquid applications.

It is installed with a 30° angular seating area, and is used primarily to vent to controlled areas or direct to the atmosphere.

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

Size	6mm - 600mm
Burst Pressure	0.2-2,068.4 barg
K_R Value (K_{RGL})	STD0.88 STDV1.98
Operating Ratio	70%
Performance Tolerance	+/- 5%
Manufacturing Range	10%

**Let us help you with all
your pressure relief questions.**

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TECHNICAL SPECIFICATIONS



Size range	6-600mm (1/4"-24")
Burst pressure range	0.2-2,068.4 barg (3-30,000 psig)
Standard materials	316 Series Stainless Steel, Nickel, Inconel® 600, Monel®, Hastelloy® C
K _R Value	STD K _{RGL} : 0.88 STDV K _{RGL} : 1.98
Max. Operating Ratio	70%
Performance Tolerance	+/-5%
Manufacturing Range	10%
Fragmentation	May fragment
Vacuum Service	May require a vacuum support
Fluid compatibility	Gas service and liquid service
Torque requirements	See installation guide
Cycling or static service	Static service
Protective linings	PFA-grade Fluoropolymer liners available for atmospheric and/or process sides
Design Standards	Designed to meet ASME Section XIII standards

Certifications

ASME UD
CRN
PED 2014/68/EU
China SELO

Related Products

Sensors

AMS
SVT
CMS

Holders

RDI
RDI - P
RDH
UNION

Burst Pressure Ranges

STD Min/Max Burst Pressure @ 22° C (barg) / 72° F (psig)



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)	FLUOROPOLYMER LINER ON ONE SIDE		FLUOROPOLYMER LINER ON TWO SIDES	
DN (mm)	inches				MIN barg (psig)	MAX barg (psig)	MIN barg (psig)	MAX barg (psig)
15	0.5	316 Stainless Steel	43.1 (625)	2068.4 (30000)	56.5 (820)	689.5 (10000)	62.7 (910)	689.5 (10000)
		Nickel	19.3 (280)	1378.9 (20000)	34.5 (500)	413.7 (6000)	41.4 (600)	413.7 (6000)
		Inconel	30.3(440)	2068.4 (30000)	54.4 (790)	689.5 (10000)	54.4 (790)	689.5 (10000)
		Monel	23.4 (340)	1723.7 (25000)	34.5 (500)	413.7 (6000)	41.4 (600)	413.7 (6000)
		Aluminum	6.2 (90)	103.4 (1500)	16.2 (235)	103.4 (1500)	26.2 (380)	103.4 (1500)
		Hastelloy C	75.8 (1100)	2068.4 (30000)	85.9 (1245)	2068.4 (30000)	90.7 (1315)	2068.4 (30000)
20	0.75	316 Stainless Steel	31.4 (455)	68.9 (1000)	44.8 (650)	68.9 (1000)	51.0 (740)	68.9 (1000)
		Nickel	13.8 (200)	68.9 (1000)	25.5 (370)	68.9 (1000)	31.7 (460)	68.9 (1000)
		Inconel	22.4 (325)	68.9 (1000)	34.5 (500)	68.9 (1000)	40.7 (590)	68.9 (1000)
		Monel	17.2 (250)	68.9 (1000)	29.0 (420)	68.9 (1000)	35.2 (510)	68.9 (1000)
		Aluminum	3.8 (55)	44.8 (650)	15.5 (225)	44.8 (650)	21.7 (315)	44.8 (650)
		Hastelloy C	51.7 (750)	2068.4 (30000)	58.2 (844)	2068.4 (30000)	61.4 (890)	30000 (2068.4)
25	1	316 Stainless Steel	22.1 (320)	255.1 (3700)	25.5 (370)	255.1 (3700)	29.0 (420)	255.1 (3700)
		Nickel	10.0 (145)	255.1 (3700)	13.4 (195)	255.1 (3700)	16.9 (245)	255.1 (3700)
		Inconel	15.5 (225)	255.1 (3700)	19.0 (275)	255.1 (3700)	22.4 (325)	255.1 (3700)
		Monel	12.1 (175)	255.1 (3700)	15.5 (225)	255.1 (3700)	19.0 (275)	255.1 (3700)
		Aluminum	2.8 (40)	68.9 (1000)	6.2 (90)	68.9 (1000)	9.7 (140)	68.9 (1000)
		Hastelloy C	34.5 (500)	255.1 (3700)	40.8 (592)	255.1 (3700)	43.2 (627)	255.1 (3700)
40	1.5	316 Stainless Steel	14.5 (210)	151.7 (2200)	16.9 (245)	151.7 (2200)	19.3 (280)	151.7 (2200)
		Nickel	6.5 (95)	151.7 (2200)	9.0 (130)	151.7 (2200)	11.4 (165)	151.7 (2200)
		Inconel	10.3 (150)	151.7 (2200)	12.8 (185)	151.7 (2200)	15.2 (220)	151.7 (2200)
		Monel	7.9 (115)	151.7 (2200)	10.3 (150)	151.7 (2200)	12.8 (185)	151.7 (2200)
		Aluminum	1.8 (26)	51.7 (750)	4.1 (60)	48.3 (700)	6.5 (95)	48.3 (700)
		Hastelloy C	25.9 (375)	151.7 (2200)	29.7 (431)	151.7 (2200)	31.3 (454)	151.7 (2200)
50	2	316 Stainless Steel	8.3 (120)	151.7 (2200)	10.0 (145)	151.7 (2200)	11.7 (170)	151.7 (2200)
		Nickel	3.8 (55)	151.7 (2200)	5.4 (79)	151.7 (2200)	7.2 (105)	151.7 (2200)
		Inconel	6.0 (87)	151.7 (2200)	7.6 (110)	151.7 (2200)	9.3 (135)	151.7 (2200)
		Monel	4.6 (67)	151.7 (2200)	6.3 (91)	151.7 (2200)	7.9 (115)	151.7 (2200)
		Aluminum	1.1 (16)	39.3 (570)	2.8 (40)	34.5 (500)	4.4 (64)	34.5 (500)
		Hastelloy C	17.2 (250)	151.7 (2200)	19.9 (289)	151.7 (2200)	21.1 (306)	151.7 (2200)
80	3	316 Stainless Steel	6.2 (90)	151.7 (2200)	7.2 (105)	151.7 (2200)	8.3 (120)	151.7 (2200)
		Nickel	2.8 (41)	151.7 (2200)	3.8 (55)	151.7 (2200)	4.8 (69)	151.7 (2200)
		Inconel	4.3 (63)	151.7 (2200)	5.3 (77)	151.7 (2200)	6.3 (91)	151.7 (2200)
		Monel	3.4 (49)	151.7 (2200)	4.3 (63)	151.7 (2200)	5.3 (77)	151.7 (2200)
		Aluminum	0.8 (12)	31.7 (460)	1.8 (26)	27.6 (400)	2.8 (40)	27.6 (400)
		Hastelloy C	12.1 (175)	151.7 (2200)	14.1 (205)	2200 (151.7)	15 (217)	151.7 (2200)
100	4	316 Stainless Steel	4.7 (68)	151.7 (2200)	5.4 (79)	151.7 (2200)	6.2 (90)	151.7 (2200)
		Nickel	2.1 (31)	151.7 (2200)	2.9 (42)	151.7 (2200)	3.7 (53)	151.7 (2200)
		Inconel	3.3 (48)	151.7 (2200)	4.1 (59)	151.7 (2200)	4.8 (70)	151.7 (2200)
		Monel	2.6 (37)	151.7 (2200)	3.3 (48)	151.7 (2200)	4.1 (59)	151.7 (2200)
		Aluminum	0.6 (9)	24.8 (360)	1.4 (20)	325 (22.4)	2.1 (31)	22.4 (325)
		Hastelloy C	9.7 (140)	151.7 (2200)	11.1 (161)	151.7 (2200)	11.7 (170)	151.7 (2200)
150	6	316 Stainless Steel	3.5 (51)	248.2 (3600)	4.1 (59)	55.2 (800)	4.6 (67)	55.2 (800)
		Nickel	1.6 (23)	96.5 (1400)	2.1 (31)	34.5 (500)	2.7 (39)	34.5 (500)
		Inconel	2.5 (36)	151.7 (2200)	3.0 (44)	55.2 (800)	3.6 (52)	55.2 (800)
		Monel	1.9 (28)	124.1 (1800)	2.5 (36)	34.5 (500)	3.0 (44)	34.5 (500)
		Aluminum	0.5 (7)	19.0 (275)	1.0 (15)	16.5 (240)	1.6 (23)	16.5 (240)
		Hastelloy C	6.6 (95)	248.3 (3600)	7.6 (110)	248.3 (3600)	7.9 (115)	248.3 (3600)

Burst Pressure Ranges cont.

STD Min/Max Burst Pressure @ 22° C (barg) / 72° F (psig)



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)	FLUOROPOLYMER LINER ON ONE SIDE		FLUOROPOLYMER LINER ON TWO SIDES	
DN (mm)	inches				MIN barg (psig)	MAX barg (psig)	MIN barg (psig)	MAX barg (psig)
200	8	316 Stainless Steel	2.8 (40)	144.8 (2100)	3.2 (46)	1.4 (600)	3.6 (52)	41.4 (600)
		Nickel	1.2 (18)	75.8 (1100)	1.7 (24)	25.9 (375)	2.1 (30)	25.9 (375)
		Inconel	1.9 (28)	117.2 (1700)	2.3 (34)	41.4 (600)	2.8 (40)	41.4 (600)
		Monel	1.5 (22)	100.0 (1450)	1.9 (28)	25.9 (375)	2.3 (34)	25.9 (375)
		Aluminum	0.3 (5)	14.1 (205)	0.8 (11)	12.4 (180)	1.2 (17)	12.4 (180)
		Hastelloy C	4.8 (70)	144.8 (2100)	5.4 (79)	144.8 (2100)	5.8 (84)	144.8 (2100)
250	10	316 Stainless Steel	2.1 (30)	96.5 (1400)	2.4 (35)	34.5 (500)	2.8 (40)	34.5 (500)
		Nickel	1.0 (14)	55.2 (800)	1.3 (19)	20.7 (300)	1.7 (24)	20.7 (300)
		Inconel	1.5 (22)	96.5 (1400)	1.9 (27)	34.5 (500)	2.2 (32)	34.5 (500)
		Monel	1.2 (17)	79.3 (1150)	1.5 (22)	20.7 (300)	1.9 (27)	20.7 (300)
		Aluminum	0.3 (4)	11.4 (165)	0.6 (9)	9.3 (135)	1.0 (14)	9.3 (135)
		Hastelloy C	3.8 (55)	96.6 (1400)	4.3 (63)	96.6 (1400)	4.6 (66)	96.6 (1400)
300	12	316 Stainless Steel	1.9 (27)	68.9 (1000)	2.1 (31)	27.6 (400)	2.4 (35)	27.6 (400)
		Nickel	0.8 (12)	46.2 (670)	1.1 (16)	17.2 (250)	1.4 (20)	17.2 (250)
		Inconel	1.3 (19)	68.9 (1000)	1.6 (23)	27.6 (400)	1.9 (27)	27.6 (400)
		Monel	1.0 (15)	66.2 (960)	1.3 (19)	17.2 (250)	1.6 (23)	17.2 (250)
		Aluminum	0.3 (4)	9.7 (140)	0.6 (8)	7.6 (110)	0.8 (12)	7.6 (110)
		Hastelloy C	3.1 (45)	68.9 (1000)	3.5 (51)	68.9 (1000)	3.7 (54)	68.9 (1000)
350	14	316 Stainless Steel	1.6 (23)	51.7 (750)	Consult Factory			
		Nickel	0.8 (11)	39.3 (570)				
		Inconel	1.2 (17)	50.0 (725)				
		Monel	0.9 (13)	51.7 (750)				
		Aluminum	0.2 (3)	8.6 (125)				
		Hastelloy C	2.8 (40)	51.7 (750)				
400	16	316 Stainless Steel	1.4 (20)	34.5 (500)	Consult Factory			
		Nickel	0.6 (9)	28.3(410)				
		Inconel	1.0 (15)	34.5 (500)				
		Monel	0.8 (11)	34.5 (500)				
		Aluminum	0.2 (3)	7.2 (105)				
		Hastelloy C	2.4 (35)	34.5 (500)				
450	18	316 Stainless Steel	1.2 (18)	32.7 (475)	Consult Factory			
		Nickel	0.6 (8)	30.7 (445)				
		Inconel	0.9 (13)	32.7 (475)				
		Monel	0.7 (10)	32.7 (475)				
		Aluminum	0.2 (3)	6.5 (95)				
		Hastelloy C	2.1 (30)	32.7 (475)				
500	20	316 Stainless Steel	1.1 (16)	31.0 (450)	Consult Factory			
		Nickel	0.6 (8)	27.6 (400)				
		Inconel	0.8 (12)	31.0 (450)				
		Monel	0.6 (9)	31.0 (450)				
		Aluminum	0.1 (2)	5.9 (85)				
		Hastelloy C	1.9 (28)	31.0 (450)				
600	24	316 Stainless Steel	3.0 (44)	15.9 (230)	Consult Factory			
		Nickel	2.6 (37)	10.0 (145)				
		Inconel	3.1 (45)	15.9 (230)				
		Monel	3.8 (55)	31.0 (450)				
		Aluminum	0.1 (2)	4.9 (71)				
		Hastelloy C	3.7 (50)	31.0 (450)				



Free Flow Area / Minimum Net Flow Area (MNFA)

NOMINAL BORE		MNFA	
DN (mm)	inches	mm ²	Sq. Inch
6	0.25	31.61	0.049
15	0.5	122.58	0.19
20	0.75	283.87	0.44
25	1	387.09	0.6
40	1.5	954.83	1.48
50	2	1,838	2.85
80	3	3,490	5.41
100	4	6,645	10.3
150	6	14,387	22.3
200	8	29,419	45.6
250	10	46,903	72.7
300	12	65,161	101
350	14	87,096	135
400	16	113,548	176
450	18	148,387	230
500	20	180,000	279
600	24	267,741	415

Angular Seat STD Vacuum Support Requirements

MATERIAL	FULL VACUUM barg (psig)	2/3 VACUUM barg (psig)	1/2 VACUUM barg (psig)
316 Stainless Steel	82.73 (1200)	67.22 (975)	49.98 (725)
Nickel	82.73 (1200)	67.22 (975)	49.98 (725)
Inconel 600	82.73 (1200)	67.22 (975)	49.98 (725)
Monel	82.73 (1200)	67.22 (975)	49.98 (725)
Aluminum	31.02 (450)	360 (24.82)	49.98 (725)
Hastelloy C	82.73 (1200)	67.22 (975)	49.98 (725)

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 psig (1 barg) and other disc materials consult factory.

Burst Tolerance

+/-5% > 2.8 barg +/-5% > 40 psig	+/-0.14 barg ≤ 2.8 barg +/-2 psig ≤ 40 psig
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K_R Value (Frictional Loss Factor)

K _R	STD	STDV
K _{RGL}	0.88	1.98