

SAFE-GARD

CROSS-SCORED FORWARD ACTING DISC

**Technically advanced rupture disc *with cross-scoring*
for increased safety at very high pressures**



Safe-Gard is a forward acting rupture disc with precision cross-scoring on the vent side for enhanced safety in liquid, gas or vapour applications.

The single-membrane, domed rupture disc combines the versatility of conventional metal discs with the performance benefits of scored technology. Safe-Gard features a smooth surface finish to help prevent product build-up. The disc can be supplied with a fluoropolymer liner on the process and/or vacuum side for additional protection from corrosion.

The range of sizes and options for opening or non-opening vacuum support make Safe-Gard suitable for use at very high pressures as a metal alternative to composite domed discs.

Size	15 - 500 mm
Burst Pressure	3.1 - 185 barg
Temperature	-200°C to 600°C
Operating Ratio	90%
Performance Tolerance	+/-5%
Manufacturing Range	0%

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

UK office | North Shields

+44 (0)191 293 1234 | uksales@osecoelfab.com

US office | Broken Arrow

+1 (918) 258 5626 | info@osecoelfab.com

osecoelfab.com

**REQUEST A QUOTE FOR
SAFE-GARD**



TECHNICAL SPECIFICATIONS



Size range	15-500mm (1/2" - 20")
Burst pressure range	3.1-185 barg (51-2683 psig)
Temperature range	-200°C to 600°C (-328°F to 1,112°F)
Standard materials	Stainless Steel as standard, others available on request
K _R Value	0.68
Max. Operating Ratio	90% of minimum burst pressure (86% of nominal burst pressure)
Performance Tolerance	+/-5%
Manufacturing Range	0%
Fragmentation	Non-fragmenting design
Vacuum Service	Additional vacuum support available for lower burst pressures
Fluid compatibility	Gas service, liquid service and vapour service
Torque requirements	Not torque sensitive
Cycling or static service	Cycling service
Protective linings	Fluoropolymer liners available on vent and process sides
Relief Valve Isolation	Suitable for relief valve isolation
Design Standards	Designed to meet ISO 4126-2:2019 or ASME Section XIII standards

Certifications

ASME UD
CE
SIL

Related Products

Holders

STANDARD (FORWARD) HOLDER

Sensors

FLO-TEL

FLO-TEL XD

Burst Pressure Ranges

Safe-Gard Min/Max Burst Pressure @ 15-30°C (59-86°F)



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)	MINIMUM BURST PRESSURE TO WITHSTAND VACUUM WITHOUT VACUUM SUPPORT barg (psig)
DN (mm)	inches				
15	0.5	Stainless Steel/Inconel Hastelloy C Monel Nickel	15 (218) 17 (247) 13.5 (196) 12 (174)	185 (2,683) 185 (2,683) 175 (2,538) 170 (2,466)	n/a
25	1	Stainless Steel/Inconel Hastelloy C Monel Nickel	4 (58) 4.6 (67) 3.6 (52) 3.2 (46)	185 (2,683) 185 (2,683) 160 (2,320) 150 (2,176)	5 (73)
40	1.5	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.8 (55) 4.4 (64) 2.4 (49) 3 (45)	140 (2,031) 140 (2,031) 125 (1,813) 120 (1,740)	6 (87)
50	2	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.5 (51) 4 (58) 3.2 (46) 2.8 (41)	125 (1,813) 125 (1,813) 110 (1,595) 100 (1,450)	7 (102)
65	2.5	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.5 (51) 4 (58) 3.2 (46) 2.8 (41)	105 (1,523) 105 (1,523) 90 (1,309) 85 (1,233)	9 (131)
80	3	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.1 (45) 3.6 (52) 2.8 (41) 2.5 (36)	90 (1,309) 90 (1,309) 80 (1,160) 70 (1,015)	10 (145)
100	4	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.1 (45) 3.6 (52) 2.8 (41) 2.5 (36)	75 (1,088) 75 (1,088) 68 (986) 60 (870)	12 (174)
150	6	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.0 (44) 3.5 (51) 2.7 (39) 3 (44)	55 (798) 55 (798) 50 (725) 40 (580)	17 (247)
200	8	Stainless Steel/Inconel Hastelloy C Monel Nickel	3.5 (51) 4 (58) 3.2 (46) 2.4 (35)	40 (580) 40 (580) 38 (551) 30 (435)	Consult Factory
250	10	Stainless Steel/Inconel Hastelloy C Monel Nickel	4.5 (65) 5.2 (75) 4.0 (58) 3.6 (52)	33 (479) 33 (479) 30 (435) 24 (348)	
300	12	Stainless Steel/Inconel Hastelloy C Monel Nickel	5.0 (73) 5.8 (84) 4.5 (65) 4 (58)	30 (435) 30 (435) 28 (406) 20 (290)	
350	14	Stainless Steel/Inconel Hastelloy C Monel Nickel	6 (87) 6.9 (100) 5.4 (78) 4.8 (80)	28 (406) 28 (406) 24 (348) 18 (261)	
400	16	Stainless Steel/Inconel Hastelloy C Monel Nickel	6 (87) 6.9 (100) 5.4 (78) 4.8 (80)	24 (348) 24 (348) 20 (290) 16 (232)	
450	18	Stainless Steel/Inconel Hastelloy C Monel Nickel	6 (87) 6.9 (100) 5.4 (78) 4.8 (80)	20 (290) 20 (290) 18 (261) 14 (203)	
500	20	Stainless Steel/Inconel Hastelloy C Monel Nickel	6 (87) 6.9 (100) 5.4 (78) 4.8 (80)	18 (261) 18 (261) 16 (232) 12 (174)	

Free Flow Area / Minimum Net Flow Area (MNFA)



NOMINAL BORE		MNFA with no vacuum support (XXX)		MNFA with non-opening vacuum support (NVS)		MNFA with opening vacuum support (OVS)	
DN (mm)	inches	mm ²	Sq. Inch	mm ²	Sq. Inch	mm ²	Sq. Inch
25	1	322	0.5	244	0.38	322	0.5
40	1.5	800	1.24	608	0.95	800	1.25
50	2	1,290	2	943	1.47	1,290	2.01
65	2.5	2,112	3.27	1,564	2.44	2,112	3.29
80	3	3,200	4.96	2,421	3.77	3,200	4.99
100	4	5,161	8	3,823	5.96	5,161	8.05
150	6	11,250	17.43	7,091	11.06	11,250	17.55
200	8	20,000	31	12,629	19.7	20,000	31.19
250	10	31,250	48.44	20,036	31.25	31,250	48.74
300	12	45,000	69.75	-	-	45,000	70.18
350	14	61,250	94.94	-	-	61,250	95.53
400	16	80,000	124	-	-	80,000	124.77
450	18	101,250	156.94	-	-	101,250	157.91
500	20	125,000	193.75	-	-	125,000	194.96

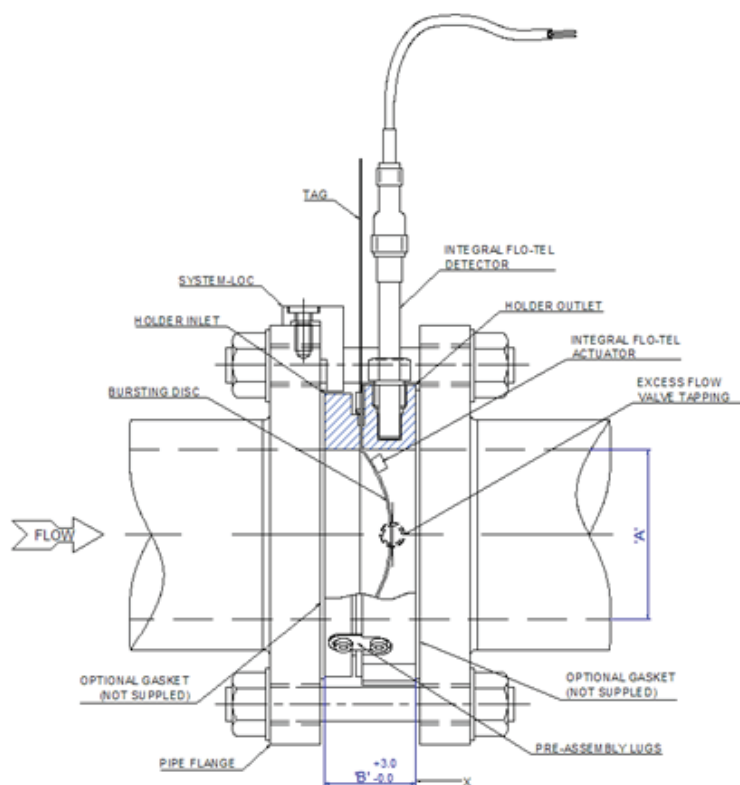
Burst Tolerance

+/-5% > 2.76 barg
+/-5% > 40 psig

+/-0.14 barg ≤ 2.75 barg
+/-2 psig ≤ 40 psig

K_R Value (Frictional Loss Factor)

K _R	Safe-Gard
K _{RGL}	0.68



NOMINAL BORE (A)		FACE-TO-FACE (B)	
DN (mm)	inches	(mm)	(inches)
25	1	37.9	1.49
40	1.5	37.9	1.49
50	2	37.9	1.49
65	2.5	40	1.58
80	3	42	1.65
100	4	46.5	1.83
150	6	62	2.44
200	8	58	2.28
250	10	58	2.28
300	12	58	2.28
350	14	50	1.97
400	16	50	1.97
450	18	50	1.97
500	20	50	1.97

FLANGE SPECIFICATIONS	
EN 1092-1 PN DESIGNATED	BS EN 1759-1 ANSI DESIGNATED
PN 6	ANSI 150
PN 10	ANSI 300
PN 16	ANSI 600
PN 20	ANSI 900
PN 25	ANSI 1500
PN 40	ANSI 2500
PN 50	-
PN 63	-
PN 100	-

Face-to-face dimensions account for the disc and holder assembly only. They do not account for gasket thickness.