

CDD

CONVENTIONAL DOMED DISC

A versatile forward acting disc offering an economic solution for many chemical processing applications



The Conventional Domed disc is a solid metal disc available in Stainless Steel as standard, with Nickel, Inconel and others available on request.

With sizes from 3mm to 800mm (1/8" to 32"), the disc offers with widest burst pressure range of any forward acting disc, from 0.5 barg to 1,400 barg (7.25 psig to 20,305 psig). The range of materials and burst pressures the disc offers makes it a versatile product suitable for a wide range of operating environments. As such, it is often an economic solution for many applications.

The Conventional Domed disc is installed into our forward rupture disc holder and is fitted for use with our re-usable Flo-Tel burst detection system as standard.

Size	3mm - 800mm
Burst Pressure	0.5 - 1,400 barg
K_R Value (K_{RGL})	1.4
Operating Ratio	85%
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





Size range	3-800mm (1/8"-32")
Burst pressure range	0.5 barg to 1,400 barg (7 psig to 20,300 psig)
Temperature range	-196°C to 600°C (-321°F to 1112°F)
Standard materials	316 Stainless Steel (others available on request)
K _R Value	1.4 (with no vacuum support)
Max. Operating Ratio	85% of minimum burst pressure (81% of nominal burst pressure)
Performance Tolerance	+/-5%
Manufacturing Range	0%
Fragmentation	May fragment
Vacuum Service	No support required above burst pressure of 30 barg (435 psig)
Fluid compatibility	Gas service, liquid service, vapour service
Torque requirements	Not torque sensitive
Protective linings	Available
Relief Valve Isolation	Not recommended for safety relief valve isolation
Design Standards	Designed to meet ISO 4126-2:2019 and PED 2014/68/EU

Certifications

ASME UD
CE
SIL

Related Products

Sensors

Flo-Tel
Flo-Tel XD

HOLDERS

Forward holders

Burst Pressure Ranges

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



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)
DN (mm)	inches			
15	0.5	Stainless Steel	40(580)	1,400 (20,305)
		Aluminium	4 (58)	60 (870)
		Nickel/Monel	20 (290)	1,000 (14,504)
		Hastelloy	70 (870)	1,400 (20,305)
25	1	Stainless Steel	20 (290)	650 (9,428)
		Aluminium	2 (29)	30 (435)
		Nickel/Monel	10 (145)	500 (7,252)
		Hastelloy	35 (508)	650 (9,428)
40	1.5	Stainless Steel	20 (290)	600 (8,702)
		Aluminium	1.6 (23)	20 (290)
		Nickel/Monel	8(116)	400 (5,801)
		Hastelloy	25(363)	600 (8,702)
50	2	Stainless Steel	17 (247)	200 (2,900)
		Aluminium	1.5 (22)	15 (218)
		Nickel/Monel	6 (87)	200 (2,900)
		Hastelloy	20 (290)	200 (2,900)
65	2.5	Stainless Steel	16 (232)	200 (2,900)
		Aluminium	1.5 (22)	14 (203)
		Nickel/Monel	6 (87)	200 (2,900)
		Hastelloy	18 (261)	200 (2,900)
80	3	Stainless Steel	15 (218)	200 (2,900)
		Aluminium	1.5 (22)	12 (174)
		Nickel/Monel	5 (73)	200 (2,900)
		Hastelloy	15 (218)	200 (2,900)
100	4	Stainless Steel	15 (218)	200 (2,900)
		Aluminium	1.2 (17)	10 (145)
		Nickel/Monel	5 (73)	150 (2,176)
		Hastelloy	15 (218)	200 (2,900)
150	6	Stainless Steel	12 (174)	160 (2,320)
		Aluminium	1 (14.5)	8 (116)
		Nickel/Monel	4 (58)	100 (1,450)
		Hastelloy	15 (218)	160 (2,320)
200	8	Stainless Steel	10 (145)	120 (1,740)
		Aluminium	0.8 (11.6)	7 (102)
		Nickel/Monel	4 (58)	80 (1,160)
		Hastelloy	12 (174)	120 (1,740)

Burst Pressure Ranges (cont.)

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



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)
DN (mm)	inches			
250	10	Stainless Steel	8 (116)	100 (1,450)
		Aluminium	0.7 (10.2)	6 (87)
		Nickel/Monel	4 (58)	70 (1,015)
		Hastelloy	10 (145)	100 (1,450)
300	12	Stainless Steel	6.5 (94)	80 (1,160)
		Aluminium	0.6 (8.7)	5 (73)
		Nickel/Monel	4 (58)	60 (870)
		Hastelloy	8 (116)	80 (1,160)
350	14	Stainless Steel	6.5 (94)	70(1,015)
		Aluminium	0.5 (7.3)	4(58)
		Nickel/Monel	4 (58)	50(725)
		Hastelloy	8 (116)	70(1,015)
400	16	Stainless Steel	6.5 (94)	60(870)
		Aluminium	0.5 (7.3)	3(44)
		Nickel/Monel	4 (58)	50(725)
		Hastelloy	7 (101)	60(870)
450	18	Stainless Steel	6 (87)	55 (797)
		Aluminium	0.5 (7.3)	2 (29)
		Nickel/Monel	4 (58)	45 (653)
		Hastelloy	7 (101)	55 (797)
500	20	Stainless Steel	5.5 (80)	50 (725)
		Aluminium	0.5 (7.3)	2 (29)
		Nickel/Monel	4 (58)	40 (580)
		Hastelloy	6 (87)	50 (725)
600	24	Stainless Steel	5(73)	40 (580)
		Aluminium	1(14.5)	2 (29)
		Nickel/Monel	3(44)	30 (435)
		Hastelloy	5(73)	40 (580)
700	28	Stainless Steel	4 (58)	35 (509)
		Aluminium	1 (14.5)	1.5 (22)
		Nickel/Monel	2.5 (36)	24 (348)
		Hastelloy	4 (58)	35 (509)
800	32	Stainless Steel	3 (44)	30 (435)
		Aluminium	1 (14.5)	1.2 (17)
		Nickel/Monel	2 (29)	20 (290)
		Hastelloy	3 (44)	30 (435)

Free Flow Area / Minimum Net Flow Area (MNFA)



NOMINAL BORE		MNFA with no vacuum support (XXX)		MNFA with non-opening vacuum support (NVS)	
DN (mm)	inches	mm ²	Sq. Inch	mm ²	Sq. Inch
25	1	507	0.78	383	0.59
40	1.5	1,257	1.95	905	1.41
50	2	2,027	3.14	1,493	2.33
65	2.5	3,318	4.78	2,155	3.36
80	3	5,027	7.39	3,598	5.61
100	4	8,107	12.57	5,110	7.97
150	6	17,671	27.39	11,187	17.44
200	8	31,416	48.7	19,220	29.98
250	10	49,087	76.09	31,915	49.78
300	12	70,686	109.6	-	-
350	14	96,211	135.2	-	-
400	16	125,664	176.7	-	-
450	18	159,043	223.6	-	-
500	20	196,350	278	-	-
600	24	282,743	440.98	-	-
700	28	-	-	-	-
800	32	-	-	-	-

Burst Tolerance

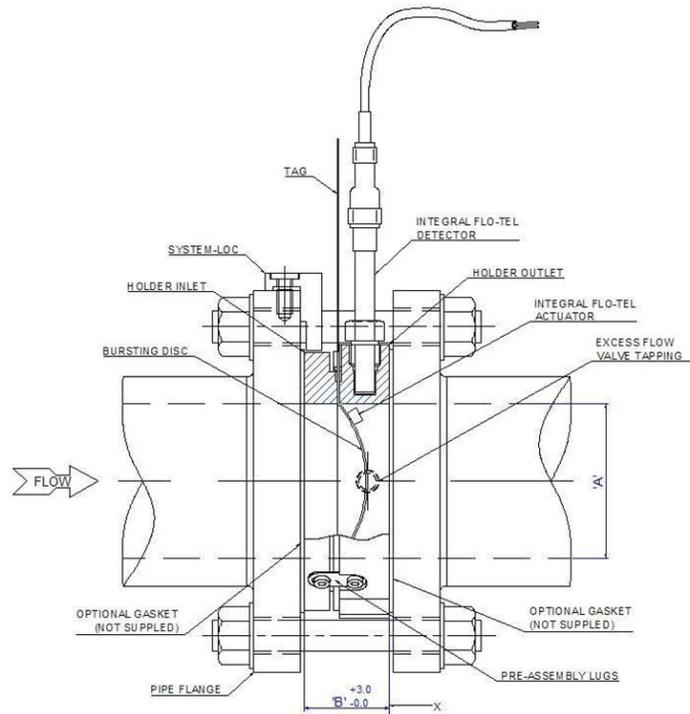
+/-0.1 barg ≤ 2 barg
+/-5% > 2 barg

+/-1.45 psig ≤ 29 psig
+/-5% > 29 psig

NB: Using aluminium for the disc increases the performance tolerance by 5%

K_R Value (Frictional Loss Factor)

K _R	Conventional Domed
K _{RGL}	1.4



NOMINAL BORE (A)		FACE-TO-FACE (B)
DN (mm)	inches	mm
25	1	37.9
40	1.5	37.9
50	2	37.9
65	2.5	40
80	3	42
100	4	46.5
150	6	62
200	8	58
250	10	58
300	12	58
350	14	50
400	16	50
450	18	50
500	20	50
600	24	50

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.