

# OPTI-GARD (HIGH-STRENGTH MAGNET)

High-performance, reverse acting **Opti-Gard disc** with a **high-strength magnet** for use in **22cr** and **25cr duplex holders**.



We can supply our high-performance Opti-Gard rupture disc with a high-strength magnet for use in 22cr and 25cr duplex holders.

The specially developed high-strength magnet means you can still use our unique, non-invasive burst detection systems Flo-Tel and Flo-Tel XD for accurate signalling up to 140°C.

Standard rupture discs will not allow this, as the duplex stainless steel is magnetic and prevents the detector from functioning correctly.

<b>Size</b>	2" - 24"
<b>Burst Pressure</b>	13 - 970 psig
<b>Max. Temperature</b>	284°F
<b>Operating Ratio</b>	95%
<b>Performance Tolerance</b>	+/- 3%
<b>Manufacturing Range</b>	0%

Let us help you with all your pressure relief questions.

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# TECHNICAL SPECIFICATIONS



Size range	2"-24" (50-600mm)
Burst pressure range	13 psig to 870 psig (0.9 barg to 60 barg)
Temperature range	Maximum 284°F (140°C) when used in conjunction with Flo-Tel detection
Standard materials	Full range for disc suitable with 25cr duplex holder only
Max. Operating Ratio	95% of minimum burst pressure (92% of nominal burst pressure)
Performance Tolerance	+/-3%
Manufacturing Range	0%
Fragmentation	Non-fragmenting design
Vacuum Service	Withstands full vacuum (14.7 psi) without separate vacuum support
Fluid compatibility	Gas service, liquid service, vapour
Torque requirements	Not torque sensitive
Cycling or static service	Cycling service: Tested to over 100,000 pressure/vacuum cycles
Protective linings	Fluoropolymer liners available on vent and process sides
Relief Valve Isolation	Suitable for safety relief valve isolation
Leak tightness	Leak-tight design
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

Reverse holders

### Rupture Discs

Opti-Gard (High-Strength Magnet)  
Opti-Gard SoLo  
Opti-Gard Ferrule

# Burst Pressure Ranges

Opti-Gard (High-Strength Magnet) Min/Max Burst Pressure @ 59-86°F (15-30°C)



SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)
DN (mm)	inches			
50	2	Hastelloy C	0.9 (13)	60 (870)
		316 Stainless Steel / Inconel	1.0 (14)	60 (870)
		Nickel / Monel	1.0 (14)	45 (652)
65	2.5	Hastelloy C	0.9 (13)	60 (870)
		316 Stainless Steel / Inconel	1.0 (14)	60 (870)
		Nickel / Monel	1.0 (14)	45 (652)
80	3	Hastelloy C	0.5 (7)	50 (725)
		316 Stainless Steel / Inconel		50 (725)
		Nickel / Monel		38 (551)
100	4	Hastelloy C	0.35 (5)	50 (725)
		316 Stainless Steel / Inconel		50 (725)
		Nickel / Monel		38 (551)
150	6	Hastelloy C	0.9 (13)	40 (580)
		316 Stainless Steel / Inconel		40 (580)
		Nickel / Monel		30 (435)
200	8	Hastelloy C	0.9 (13)	30 (435)
		316 Stainless Steel / Inconel		30 (435)
		Nickel / Monel		23 (334)
250	10	Hastelloy C	0.9 (13)	20 (290)
		316 Stainless Steel / Inconel		20 (290)
		Nickel / Monel		15 (217)
300	12	Hastelloy C	0.9 (13)	15 (217)
		316 Stainless Steel / Inconel		15 (217)
		Nickel / Monel		11 (159)
350	14	Hastelloy C	0.9 (13)	12 (174)
		316 Stainless Steel / Inconel		12 (174)
		Nickel / Monel		9.5 (137)
400	16	Hastelloy C	0.9 (13)	6 (87)
		316 Stainless Steel / Inconel		6 (87)
		Nickel / Monel		4.5 (65)
450	18	Hastelloy C	0.9 (13)	6 (87)
		316 Stainless Steel / Inconel		6 (87)
		Nickel / Monel		4.5 (65)
500	20	Hastelloy C	0.9 (13)	6 (87)
		316 Stainless Steel / Inconel		6 (87)
		Nickel / Monel		4.5 (65)
600	24	Hastelloy C	0.9 (13)	6 (87)
		316 Stainless Steel / Inconel		6 (87)
		Nickel / Monel		4.5 (65)

## Free Flow Area / Minimum Net Flow Area (MNFA)

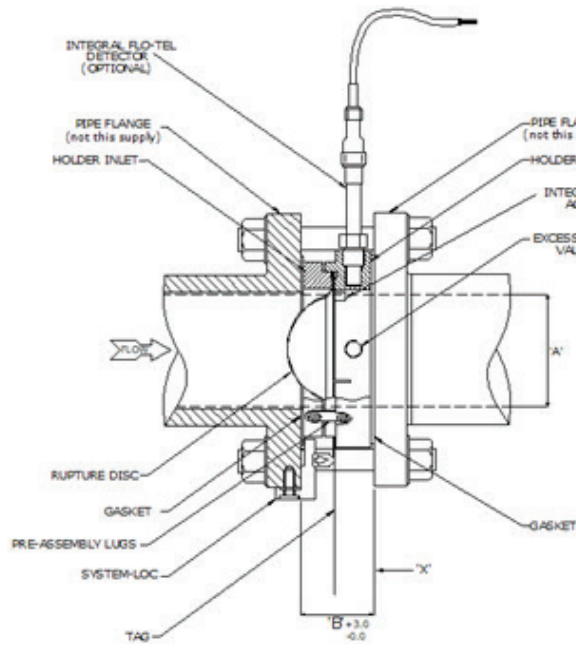


NOMINAL BORE		MNFA with no vacuum support (XXX)	
DN (mm)	inches	mm <sup>2</sup>	Sq. Inch
50	2	1,799	2.789
65	2.5	2,657	4.119
80	3	4,336	6.722
100	4	7,047	10.923
150	6	15,046	23.322
200	8	28,625	44.37
250	10	42,095	65.248
300	12	61,294	95.006
350	14	81,278	125.982
400	16	110,674	171.545
450	18	137,932	213.795
500	20	167,571	259.735
600	24	240,048	372.075

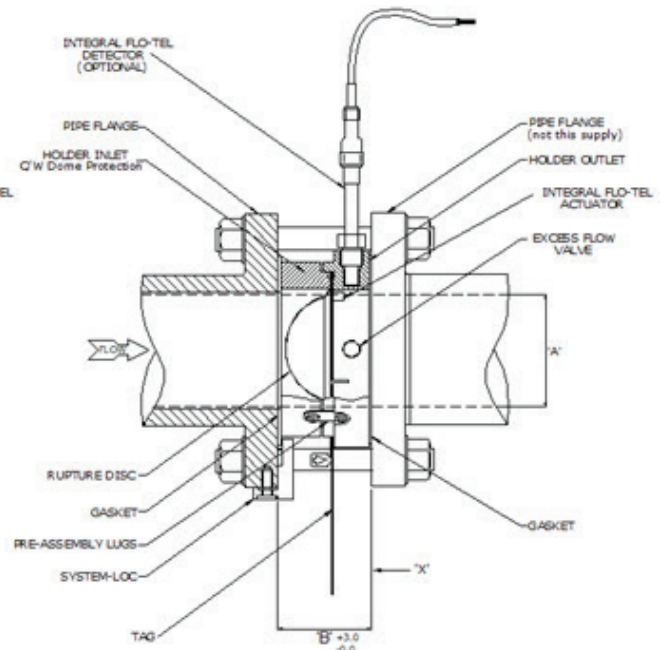
## Burst Tolerance

+/-2 psig ≤ 65 psig  
+/-3% > 65 psig

+/-0.14 barg ≤ 4.48 barg  
+/-3% > 4.48 barg



**Without Dome Protection**



**With Dome Protection**

NOMINAL BORE (A)		FACE-TO-FACE (B)	
DN (mm)	inches	With dome protection (mm)	No dome protection (mm)
50	2	44.4 (Std)	-
65	2.5	50 (Std)	-
80	3	55 (Std)	-
100	4	58 (Std)	-
150	6	74.5 (Std)	-
200	8	90.5	51.5 (Std)
250	10	105.5	51.5 (Std)
300	12	120.5	51.5 (Std)
350	14	145	51 (Std)
400	16	166	51 (Std)
450	18	182	51 (Std)
500	20	201	51 (Std)
600	24	238	51 (Std)

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.