

# FLAT COMPOSITE

HIGH-PERFORMANCE REVERSE ACTING RUPTURE DISC

*An economic solution offering enhanced protection, reliability and leak tightness for very low pressure applications.*



OsecoElfab's forward-acting Flat Composite rupture disc has a composite design with a unique tri-membrane construction.

We fit this non-fragmenting composite disc with a Flo-Tel actuator as standard for instantaneous burst detection. The Flat Composite compatible with our non-invasive, reusable detection systems Flo-Tel and Flo-Tel XD.

We can also manufacture the disc with various slotting arrangements to meet your specific application requirements. Install the disc into OsecoElfab's forward rupture disc holder.

<b>Size</b>	1" - 32"
<b>Burst Pressure</b>	1 - 50 psig
<b>K<sub>R</sub> Value (K<sub>RGL</sub>)</b>	3.94
<b>Operating Ratio</b>	40%
<b>Performance Tolerance</b>	+/- 5%
<b>Manufacturing Range</b>	0%

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

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# TECHNICAL SPECIFICATIONS



Size range	1" to 32" (25mm to 800mm)
Burst pressure range	1 psig to 50 psig (0.07 barg to 3.5 barg)
Standard materials	316 Stainless Steel (others available on request)
K <sub>R</sub> Value	3.94
Max. Operating Ratio	40% of minimum burst pressure (36% of nominal burst pressure)
Performance Tolerance	+/-5%
Manufacturing Range	0%
Fragmentation	Non-fragmenting design
Vacuum Service	Opening or non-opening vacuum support available. Back pressure support required.
Fluid compatibility	Gas service, liquid service, vapour service
Torque requirements	Not torque sensitive
Relief Valve Isolation	Suitable for safety relief valve isolation
Design Standards	Designed to meet ISO 4126-2:2019 or ASME XIII

## Certifications

ASME UD  
CE  
SIL

## Related Products

### Sensors

Flo-Tel  
Flo-Tel XD

### Holders

Forward holders

### Accessories

Test-Tel  
System-Loc  
Excess Flow Valves  
Tel-Tale Gauge

# Burst Pressure Ranges

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



SIZE		MATERIAL*	MIN barg (psig)	MAX barg (psig)
DN (mm)	inches			
25	1	316 Stainless Steel top section Nickel top section	0.42 (6) 0.21 (3)	2.07 (30) 1.04 (15)
40	1.5	316 Stainless Steel top section Nickel top section	0.28 (4) 0.14 (2)	1.38 (20) 0.7 (10)
50	2	316 Stainless Steel top section Nickel top section	0.28 (4) 0.14 (2)	1.38 (20) 0.7 (10)
65	2.5	316 Stainless Steel top section Nickel top section	0.28 (4) 0.14 (2)	1.38 (20) 0.7 (10)
80	3	316 Stainless Steel top section Nickel top section	0.28 (4) 0.14 (2)	1.38 (20) 0.7 (10)
100	4	316 Stainless Steel top section Nickel top section	0.28 (4) 0.14 (2)	1.38 (20) 0.7 (10)
150	6	316 Stainless Steel top section Nickel top section	0.14 (2) 0.07 (1)	0.7 (10) 0.35 (5)
200	8	316 Stainless Steel top section Nickel top section	0.14 (2) 0.07 (1)	0.7 (10) 0.35 (5)
250	10	316 Stainless Steel top section Nickel top section	0.14 (2) 0.07 (1)	0.7 (10) 0.35 (5)
300	12	316 Stainless Steel top section Nickel top section	0.14 (2) 0.07 (1)	0.7 (10) 0.35 (5)
350	14	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.6 (8.7) -
400	16	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -
450	18	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -
500	20	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -
600	24	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -
700	28	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -
800	32	316 Stainless Steel top section Nickel top section	0.07 (1) -	0.5 (7.25) -

\*All with fluoropolymer seal

## 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 <sup>2</sup>	Sq. Inch (UD range)	mm <sup>2</sup>	Sq. Inch (UD range)
25	1	448	0.607	270	0.42
40	1.5	1,164	1.655	721	1.12
50	2	1,908	2.774	1,199	1.86
65	2.5	3,166	4.678	1,912	2.96
80	3	4,839	7.216	3,412	5.29
100	4	7,869	11.81	4,736	7.34
150	6	17,319	26.246	9,253	14.34
200	8	30,946	47.19	17,182	26.63
250	10	48,500	74.22	28,084	43.53
300	12	69,980	107.4	-	-
350	14	94,569	146.5	-	-
400	16	123,785	191.9	-	-
450	18	156,929	243.2	-	-
500	20	188,574	292.3	-	-
600	24	273,397	422.6	-	-
700	28	373,928	578.9	-	-
800	32	490,167	764.77	-	-

## Burst Tolerance

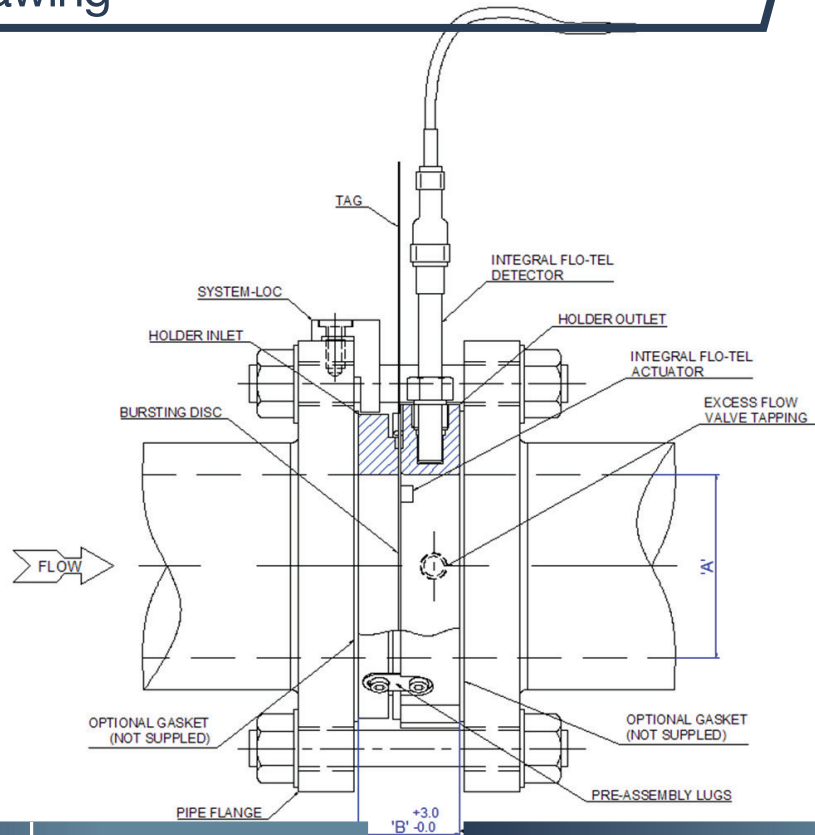
+/- 0.375 psig ≤ 3.5 psig  
 +/- 0.75 psig > 3.5 – ≤ 7.25 psig  
 +/- 5% > 7.25 psig

+/- 0.026 barg ≤ 0.24 barg  
 +/- 0.053 barg > 0.24 – ≤ 0.5 barg  
 +/- 5% > 0.5 barg

## K<sub>R</sub> Value (Frictional Loss Factor)

K <sub>R</sub>	Flat Composite
K <sub>RGL</sub>	3.94

# Schematic Drawing



NOMINAL BORE (A)		FACE-TO-FACE (B)	FLANGE SPECIFICATIONS	
DN (mm)	inches	With dome protection (mm)	EN 1092-1 PN DESIGNATED	BS EN 1759-1 ANSI DESIGNATED
25	1	37.9	PN 6	ANSI 150
40	1.5	37.9	PN 10	ANSI 300
50	2	37.9	PN 16	ANSI 600
65	2.5	40	PN 20	ANSI 900
80	3	42	PN 25	ANSI 1500
100	4	46.5	PN 40	ANSI 2500
150	6	62	PN 50	-
200	8	58	PN 63	-
250	10	58	PN 100	-
300	12	58		
350	14	50		
400	16	50		
450	18	50		
500	20	50		
600	24	50		

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