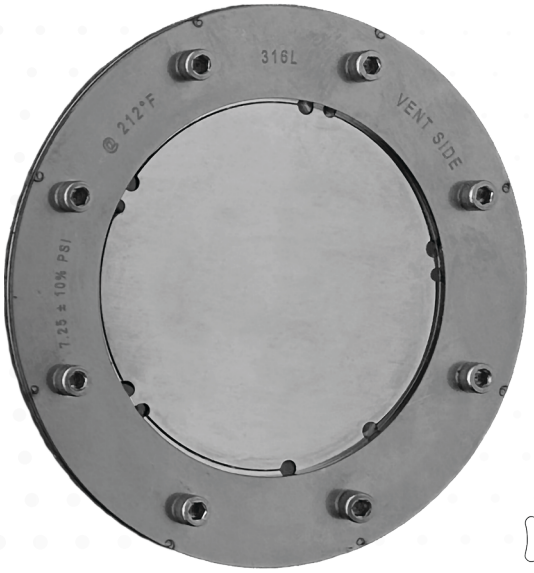
DATASHEET /
TECHNICAL SPECIFICATIONS

OsecoElfab

LITHIUM-ION FLAT COMPOSITE

FORWARD ACTING COMPOSITE RUPTURE DISC

This* ultra-low profile *flat composite disc offers* versatile, fast, accurate and reliable pressure relief *for* lithium-ion battery packs *and enclosures.



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

We can manufacture this non-fragmenting disc with various slotting arrangements to meet your specific pressure relief requirements. The disc can be bolted directly to the battery enclosure or installed into our forward rupture disc holder between flanges.

Available with our Dual-Gard technology. This innovative technology allows you to combine gradual pressure equalization with emergency pressure relief in a single, space-saving device.

Size	25mm - 800mm
Burst Pressure	0.07 - 3.5 barg
K_R Value (K_{RGL})	3.94
Operating Ratio	40%
Performance Tolerance	+/- 5%
Manufacturing Range	0%

Let us help you with all your pressure relief questions.

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TECHNICAL SPECIFICATIONS

Size range	25mm to 800mm (1" to 32")
Burst pressure range	0.07 barg to 3.5 barg (1 psig to 50 psig)
Standard materials	316 Stainless Steel (others available on request)
K_R 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

Rupture Discs
Pro-LP
Dual-Gard

Holders
Forward holders

Burst Pressure Ranges

Flat Composite Min/Max Burst Pressure @ 15-30ºC (59-86ºF)

SIZE DN (mm)	SIZE inches	MATERIAL*	MIN barg (psig)	MAX barg (psig)
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^2	Sq. Inch (UD range)	mm^2	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

+/- 0.026 barg ≤ 0.24 barg +/- 0.053 barg > 0.24 – ≤ 0.5 barg +/- 5% > 0.5 barg	+/- 0.375 psig ≤ 3.5 psig +/- 0.75 psig > 3.5 – ≤ 7.25 psig +/- 5% > 7.25 psig

K_R Value (Frictional Loss Factor)

K_R	Flat Composite
K_{RGL}	3.94