DATASHEET /
TECHNICAL SPECIFICATIONS

OE for Pharma

OPR+/OPK+ FOR API

HIGH-PERFORMANCE REVERSE ACTING RUPTURE DISC

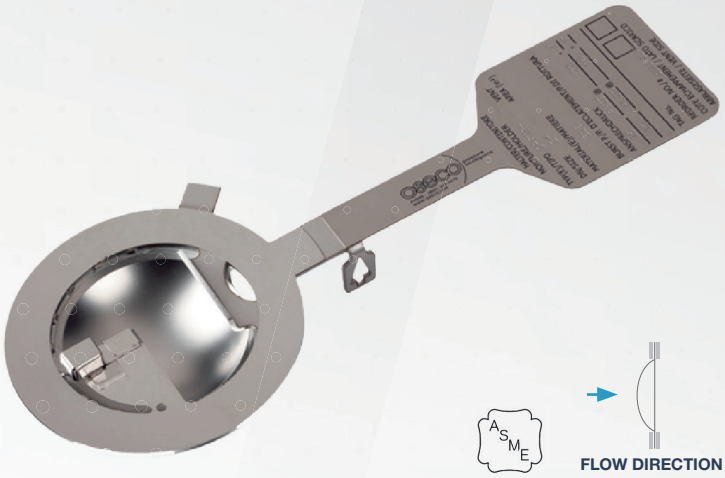
Versatile, single disc solution suitable for a wide range of bioprocessing and API plant requirements.

FDA

ASME BPE

ISO 1127

Meets bioprocessing requirements



OsecoElfab's OPR+/OPK+ disc is an advanced rupture disc peripherally scored on the vent side for accurate burst control. With a 95% operating to burst pressure ratio, the OPR+/OPK+ provides a single disc solution across a wide range of sizes and burst pressures.

The OPR+/OPK+ offers outstanding performance characteristics for liquid, gas or vapor applications. It is non-fragmenting and features a smooth process side to minimize product buildup.

The OPR+/OPK+ disc can be used with the Flo-Tel burst sensor for non-invasive burst detection (NB: Ferromagnetic disc materials are not suitable for use with Flo-Tel).

Size	1" - 12"
Burst Pressure	5 - 1,160 psig
K_R Value (K_{RGL})	0.78
Operating Ratio	95%
Performance Tolerance	+/- 5%
Manufacturing Range	0%

Let us help you with all your pressure relief questions.

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TECHNICAL SPECIFICATIONS

Size range	1"-12" (25-300mm)
Burst pressure range	5 psig to 1160 psig (0.35 barg to 79.98 barg)
Standard materials	316 Series Stainless Steel, Inconel® 600, Monel® and Hastelloy® C
K_R Value	0.78
Max. Operating Ratio	95%
Performance Tolerance	+/-5%
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 and vapour service
Torque requirements	See installation guide
Cycling or static service	Cycling service
Relief Valve Isolation	Suitable for safety relief valve isolation
Design Standards	Designed to meet ASME Section XIII standards

Certifications

ASME UD
CRN
PED 2014/68/EU

Related Products

Sensors
Flo-Tel

Holders
OPR
OPK

One Piece Unit
Oseco Safety
Cartridge

Burst Pressure Ranges

OPR+/OPK+ Min/Max Burst Pressure @ 72° F (psig) / 22° C (barg)

SIZE		OPR+ (LOW PRESSURE)		OPK+ (HIGH PRESSURE)	
inches D	N (mm)	MIN* psig (barg)	MAX psig (barg)	MIN* psig (barg)	MAX psig (barg)
1	25	100 (6.89)	250 (17.24)	250 (17.24)	1160 (79.98)
1.5	40	25 (1.72)	250 (17.24)	250 (17.24)	1087 (74.95)
2	50	15 (1.03)	250 (17.24)	250 (17.24)	1015 (69.98)
3	80	8 (0.55)	200 (13.79)	200 (13.79)	507 (34.96)
4	100	5 (0.34)	175 (12.07)	175 (12.07)	363 (25.03)
6	150	13 (0.90)	100 (6.89)	100 (6.89)	320 (22.06)
8	200	13 (0.90)	100 (6.89)	100 (6.89)	300 (20.68)
10	250	13 (0.90)	100 (6.89)	100 (6.89)	274 (18.89)
12	300	13 (0.90)	100 (6.89)	100 (6.89)	250 (17.24)

* Mins increase if a Flo-Tel burst detector is added

Free Flow Area / Minimum Net Flow Area (MNFA)

NOMINAL BORE		MNFA OPR+ (LOW PRESSURE)		MNFA OPK+ (HIGH PRESSURE)	
inches	DN (mm)	Sq. Inch	mm^2	Sq. Inch	mm^2
1	25	0.775	500	0.792	511
1.5	40	1.693	1092	1.709	1103
2	50	2.843	1834	2.899	1870
3	80	6.809	4393	7.029	4535
4	100	10.96	7071	11.17	7206
6	150	23.38	15084	24.18	15600
8	200	44.18	28503	45.46	29329
10	250	65.05	41968	67.64	43639
12	300	94.87	61206	99.28	64051

Burst Tolerance

+/-5% > 40 psig +/-5% > 2.8 barg	+/-2 psig ≤ 40 psig +/-0.14 barg ≤ 2.8 barg

K_R Value (Frictional Loss Factor)

K_R	OPR+	OPK+	OPFTR	OPFTK
K_{RGL}	0.78	1.5	1.7	2.77

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