DATASHEET /
TECHNICAL SPECIFICATIONS

OE for Pharma

FAS™ FOR API

FORWARD ACTING SCORED

The FAS for API is a high-performance rupture disc for use in API plants and bioprocesses requiring higher operating pressures.

- FDA
- ASME BPE
- ISO 1127

Meets bioprocessing requirements



The forward acting FAS for API is cross-scored after the forming of its high crown, which yields a high-performance disc to withstand high operating pressures wtihin the most difficult applications.

The FAS offers a smooth, non-scored surface on the process side. This limits product accumulation on the disc and reduces the risk of polymerization and crystallization of media on the disc surface.

The FAS™ delivers the lowest Flow Resistance Factors (FRF), Kr, for forward acting discs for gas and liquid in the market.

Size	1" - 24"
Burst Pressure	40-5,000 psig
K_R Value	K_{RG} 0.223 K_{RL} 0.19
Operating Ratio	90%
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"-24" (25-600mm)
Burst pressure range	40-5,000 psig (2.8-344.7 barg)
Temperature range	Up to 900°F (482°C)
Standard materials	316 Series Stainless Steel, Nickel, Inconel® 600, Monel®, Hastelloy® C
K_R Value	K_{RG}: 0.223 K_{RL}: 0.19
Max. Operating Ratio	90% of nominal burst pressure
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 and liquid service
Torque requirements	See installation guide
Cycling or static service	Static service
Protective linings	PFA-grade Fluoropolymer liners available for atmospheric and/or process sides
Relief Valve Isolation	Suitable for safety relief valve isolation, especially at high pressures
Disc Surface Finish	Smooth surface on the process side to minimize product build-up
Design Standards	Designed to meet ASME Section XIII standards

Certifications

ASME UD
CRN
CE
CU/TR 032
China SELO

Related Products

Sensors
AMS
SVT
CMS

Holders
FRDI
FRDI - P
FRDH

One Piece Unit
Oseco Safety
Cartridge

Burst Pressure Ranges

FAS Min/Max Burst Pressure @ 72° F (psig) /22° C (barg)

SIZE inches	SIZE DN (mm)	MATERIAL	MIN* psig (barg)	MINIMUM TO WITHSTAND FULL VACUUM*	RING ADDED IF BELOW**	MAX psig (barg)
1	25	316 Stainless Steel Nickel Inconel Monel Hastelloy C	300 (20.7) 70 (4.8) 150 (10.3) 250 (17.2) 160 (11.0)	300 (20.7) 140 (9.7) 200 (13.8) 250 (17.2) 270 (18.6)	475 (32.7) 350 (24.1) 400 (27.6) 350 (24.1) 550 (37.9)	4100 (282.7) 3500 (241.3) 4000 (275.8) 3750 (258.5) 5000 (344.7)
1.5	40	316 Stainless Steel Nickel Inconel Monel Hastelloy C	80 (5.5) 50 (3.4) 80 (5.5) 60 (4.1) 125 (8.6)	160 (11.0) 100 (6.9) 170 (11.7) 120 (8.3) 250 (17.2)	350 (24.1) 250 (17.2) 300 (20.7) 275 (19.0) 400 (27.6)	4000 (275.8) 2900 (199.9) 3900 (268.9) 3500 (241.3) 4500 (310.3)
2	50	316 Stainless Steel Nickel Inconel Monel Hastelloy C	60 (4.1) 40 (2.8) 65 (4.5) 50 (3.4) 100 (6.9)	120 (8.3) 80 (5.5) 130 (9.0) 100 (6.9) 200 (13.8)	270 (18.6) 180 (12.4) 225 (15.5) 200 (13.8) 300 (20.7)	3000 (206.8) 2000 (137.9) 2500 (172.4) 2300 (158.6) 3500 (241.3)
3	80	316 Stainless Steel Nickel Inconel Monel Hastelloy C	55 (3.8) 30 (2.1) 50 (3.4) 40 (2.8) 80 (5.5)	110 (7.6) 60 (4.1) 100 (6.9) 80 (5.5) 160 (11.0)	200 (13.8) 145 (10.0) 225 (15.5) 175 (12.1) 250 (17.2)	2000 (137.9) 1600 (110.3) 2100 (144.8) 1800 (124.1) 2000 (137.9)
4	100	316 Stainless Steel Nickel Inconel Monel Hastelloy C	50 (3.4) 40 (2.8) 50 (3.4) 45 (3.1) 70 (4.8)	110 (7.6) 80 (5.5) 100 (6.9) 90 (6.2) 140 (9.7)	200 (13.8) 125 (8.6) 175 (12.1) 150 (10.3) 250 (17.2)	2000 (137.9) 1400 (96.5) 1800 (124.1) 1600 (110.3) 2000 (137.9)
6	150	316 Stainless Steel Nickel Inconel Monel Hastelloy C	50 (3.4) 40 (2.8) 55 (3.8) 50 (3.4) 80 (5.5)	100 (6.9) 80 (5.5) 110 (7.6) 100 (6.9) 160 (11.0)	125 (8.6) 125 (8.6) 125 (8.6) 125 (8.6) 175 (12.1)	1800 (124.1) 1200 (82.7) 1600 (110.3) 1400 (96.5) 2000 (137.9)
8	200	316 Stainless Steel Nickel Inconel Monel Hastelloy C	55 (3.8) 40 (2.8) 60 (4.1) 50 (3.4) 85 (5.9)	110 (7.6) 80 (5.5) 120 (8.3) 100 (6.9) 170 (11.7)	125 (8.6) 125 (8.6) 125 (8.6) 125 (8.6) 175 (12.1)	1800 (124.1) 1100 (75.8) 1300 (89.6) 1200 (82.7) 1600 (110.3)
10	250	316 Stainless Steel Nickel Inconel Monel Hastelloy C	65 (4.5) 40 (2.8) 65 (4.5) 55 (3.8) 100 (6.9)	130 (9.0) 80 (5.5) 130 (9.0) 110 (7.6) 200 (13.8)	125 (8.6) 125 (8.6) 125 (8.6) 125 (8.6) 175 (12.1)	1500 (103.4) 1000 (68.9) 1200 (82.7) 1100 (75.8) 1500 (103.4)
12	300	316 Stainless Steel Nickel Inconel Monel Hastelloy C	75 (5.2) 40 (2.8) 75 (5.2) 60 (4.1) 110 (7.6)	150 (10.3) 80 (5.5) 150 (10.3) 120 (8.3) 220 (15.2)	125 (8.6) 125 (8.6) 125 (8.6) 125 (8.6) 175 (12.1)	1300 (89.6) 1000 (68.9) 1100 (75.8) 1000 (68.9) 1300 (89.6)
14	350	316 Stainless Steel Nickel Inconel Monel Hastelloy C	85 (5.9) 45 (3.1) 80 (5.5) 65 (4.5) 115 (7.9)	170 (11.7) 90 (6.2) 160 (11.0) 130 (9.0) 230 15.9)	n/a	1000 (68.9) 800 (55.2) 900 (62.1) 800 (55.2) 1000 (68.9)
16	400	316 Stainless Steel Nickel Inconel Monel Hastelloy C	90 (6.2) 50 (3.4) 85 (5.9) 70 (4.8) 120 (8.3)	180 (12.4) 100 (6.9) 170 (11.7) 140 (9.7) 240 (16.5)		900 (62.1) 700 (48.3) 800 (55.2) 700 (48.3) 900 (62.1)
18	450	316 Stainless Steel Nickel Inconel Monel Hastelloy C	95 (6.5) 50 (3.4) 85 (5.9) 70 (4.8) 125 (8.6)	190 (13.1) 100 (6.9) 170 (11.7) 140 (9.7) 250 (17.2)		800 (55.2) 600 (41.4) 700 (48.3) 600 (41.4) 800 (55.2)
24	600	316 Stainless Steel Nickel Inconel Monel Hastelloy C	Consult Factory			

**Consult factory for minimum burst pressures when using a liner*
***300 Series Stainless Steel Ring added on vent side*

Free Flow Area / Minimum Net Flow Area (MNFA)

NOMINAL BORE		MNFA	
inches	DN (mm)	Sq. Inch	mm^2
1	25	0.864	557
1.5	40	2.036	1,313
2	50	3.355	2,164
3	80	7.393	4,769
4	100	12.73	8,212
6	150	28.89	18,638
8	200	50.0	32,258
10	250	78.9	50,903
12	300	113.1	72,967
14	350	137.9	88,967
16	400	176.7	113,999
18	450	233.7	150,773
24	600	424.6	273,934

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	FAS
K_{RG}	0.223
K_{RL}	0.19

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