

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 within 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), K_r , 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%
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		MATERIAL	MIN psig (barg)	MINIMUM TO WITHSTAND FULL VACUUM	RING ADDED IF BELOW*	MAX psig (barg)
inches	DN (mm)					
1	25	316 Stainless Steel	110 (7.6)	220 (15.2)	475 (32.7)	4100 (282.7)
		Nickel	70 (4.8)	140 (9.7)	350 (24.1)	3500 (241.3)
		Inconel	100 (6.9)	200 (13.8)	400 (27.6)	4000 (275.8)
		Monel	75 (5.2)	140 (9.7)	350 (24.1)	3750 (258.5)
		Hastelloy C	135 (9.3)	270 (18.6)	550 (37.9)	5000 (344.7)
1.5	40	316 Stainless Steel	80 (5.5)	160 (11.0)	350 (24.1)	4000 (275.8)
		Nickel	50 (3.4)	100 (6.9)	250 (17.2)	2900 (199.9)
		Inconel	80 (5.5)	170 (11.7)	300 (20.7)	3900 (268.9)
		Monel	60 (4.1)	120 (8.3)	275 (19.0)	3500 (241.3)
		Hastelloy C	125 (8.6)	250 (17.2)	400 (27.6)	4500 (310.3)
2	50	316 Stainless Steel	60 (4.1)	120 (8.3)	270 (18.6)	3000 (206.8)
		Nickel	40 (2.8)	80 (5.5)	180 (12.4)	2000 (137.9)
		Inconel	65 (4.5)	130 (9.0)	225 (15.5)	2500 (172.4)
		Monel	50 (3.4)	100 (6.9)	200 (13.8)	2300 (158.6)
		Hastelloy C	100 (6.9)	200 (13.8)	300 (20.7)	3500 (241.3)
3	80	316 Stainless Steel	55 (3.8)	110 (7.6)	200 (13.8)	2000 (137.9)
		Nickel	30 (2.1)	60 (4.1)	145 (10.0)	1600 (110.3)
		Inconel	50 (3.4)	100 (6.9)	225 (15.5)	2100 (144.8)
		Monel	40 (2.8)	80 (5.5)	175 (12.1)	1800 (124.1)
		Hastelloy C	80 (5.5)	160 (11.0)	250 (17.2)	2000 (137.9)
4	100	316 Stainless Steel	50 (3.4)	110 (7.6)	200 (13.8)	2000 (137.9)
		Nickel	40 (2.8)	80 (5.5)	125 (8.6)	1400 (96.5)
		Inconel	50 (3.4)	100 (6.9)	175 (12.1)	1800 (124.1)
		Monel	45 (3.1)	90 (6.2)	150 (10.3)	1600 (110.3)
		Hastelloy C	70 (4.8)	140 (9.7)	250 (17.2)	2000 (137.9)
6	150	316 Stainless Steel	50 (3.4)	100 (6.9)	125 (8.6)	1800 (124.1)
		Nickel	40 (2.8)	80 (5.5)	125 (8.6)	1200 (82.7)
		Inconel	55 (3.8)	110 (7.6)	125 (8.6)	1600 (110.3)
		Monel	50 (3.4)	100 (6.9)	125 (8.6)	1400 (96.5)
		Hastelloy C	80 (5.5)	160 (11.0)	175 (12.1)	2000 (137.9)
8	200	316 Stainless Steel	55 (3.8)	110 (7.6)	125 (8.6)	1800 (124.1)
		Nickel	40 (2.8)	80 (5.5)	125 (8.6)	1100 (75.8)
		Inconel	60 (4.1)	120 (8.3)	125 (8.6)	1300 (89.6)
		Monel	50 (3.4)	100 (6.9)	125 (8.6)	1200 (82.7)
		Hastelloy C	85 (5.9)	170 (11.7)	175 (12.1)	1600 (110.3)
10	250	316 Stainless Steel	65 (4.5)	130 (9.0)	125 (8.6)	1500 (103.4)
		Nickel	40 (2.8)	80 (5.5)	125 (8.6)	1000 (68.9)
		Inconel	65 (4.5)	130 (9.0)	125 (8.6)	1200 (82.7)
		Monel	55 (3.8)	110 (7.6)	125 (8.6)	1100 (75.8)
		Hastelloy C	100 (6.9)	200 (13.8)	175 (12.1)	1500 (103.4)
12	300	316 Stainless Steel	75 (5.2)	150 (10.3)	125 (8.6)	1300 (89.6)
		Nickel	40 (2.8)	80 (5.5)	125 (8.6)	1000 (68.9)
		Inconel	75 (5.2)	150 (10.3)	125 (8.6)	1100 (75.8)
		Monel	60 (4.1)	120 (8.3)	125 (8.6)	1000 (68.9)
		Hastelloy C	110 (7.6)	220 (15.2)	175 (12.1)	1300 (89.6)
14	350	316 Stainless Steel	85 (5.9)	170 (11.7)	n/a	1000 (68.9)
		Nickel	45 (3.1)	90 (6.2)		800 (55.2)
		Inconel	80 (5.5)	160 (11.0)		900 (62.1)
		Monel	65 (4.5)	130 (9.0)		800 (55.2)
		Hastelloy C	115 (7.9)	230 (15.9)		1000 (68.9)
16	400	316 Stainless Steel	90 (6.2)	180 (12.4)		900 (62.1)
		Nickel	50 (3.4)	100 (6.9)		700 (48.3)
		Inconel	85 (5.9)	170 (11.7)		800 (55.2)
		Monel	70 (4.8)	140 (9.7)		700 (48.3)
		Hastelloy C	120 (8.3)	240 (16.5)		900 (62.1)
18	450	316 Stainless Steel	95 (6.5)	190 (13.1)		800 (55.2)
		Nickel	50 (3.4)	100 (6.9)		600 (41.4)
		Inconel	85 (5.9)	170 (11.7)		700 (48.3)
		Monel	70 (4.8)	140 (9.7)		600 (41.4)
		Hastelloy C	125 (8.6)	250 (17.2)		800 (55.2)
24	600	316 Stainless Steel Nickel Inconel Monel Hastelloy C	Consult Factory			

*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