

Opti-Gard Ferrule SoLo (OFS) Technical Information

Including specifications, performance data, temperature ranges and schematic

General specifications

Size range	25mm to 100mm (1" to 4")
Burst pressure range	0.35 barg to 5.2 barg (5 psig to 75 psig)
Materials available	Stainless Steel as standard, others available on request
Maximum operating ratio	95% of minimum burst pressure (92% of nominal burst pressure)
Performance tolerance	+/- 3% (zero manufacturing design range)
Fragmenting / non-fragmenting	Non-fragmenting
Vacuum service	Available on request, depending on application
Fluid compatibility	Liquid, gas, vapour
K _r value	n/a
Torque sensitive	n/a
Cycle life	Tested to over 100,000 pressure vacuum cycles
Reversal ratio	Arrow on offset tag
Damage ratio	<1 fail-safe
Protective linings	Available on vent and process side
Relief valve isolation	n/a
Leak tightness	Excellent
Disc surface finish	Generally better than 0.4 R-a

(* from full vacuum to 95% of the minimum burst pressure)

Burst pressure range in barg (psig) at 15-30°C (59-86°F)

Nominal bore		Material	
		Stainless Steel	
mm	inch	min	max
25	1	1.4 (20)	5.2 (75)
40	1.5	1 (14)	3.45 (50)
50	2	0.7 (10)	2.75 (40)
65	2.5	0.5 (7)	1.75 (25)
80	3	0.5 (7)	1.75 (25)
100	4	0.35 (5)	1.4 (20)

Free flow area / Minimum net flow area (MNFA)

Nominal bore		MNFA with no vacuum support (XXX)	
mm	inch	mm ²	inch ²
25	1	340	0.53
40	1.5	882	1.37
50	2	1,677	2.59
65	2.5	2,725	4.22
80	3	5,716	8.85
100	4	7,255	11.24

Performance tolerance (Zero manufacturing design range)

Burst Pressure	Tolerance	Burst Pressure	Tolerance
≤0.97 barg	+/- 0.07 barg	≤14 psig	+/- 1 psig
>0.97 – ≤4.48 barg	+/- 0.14 barg	>14 – ≤65 psig	+/- 2 psig
>4.48 barg	+/- 3%	>65 psig	+/- 3%

Note: Minimum tolerance on gas-and-liquid applications is +/-0.14barg (2psig)

Standard temperature ranges °C (°F)

Please note: For temperatures below zero, caution is needed if shock loading is involved.

Metals

Metal	Min temp	Max temp
Hastelloy B2 SB33 5N10665	-200 (-328)	426 (800)
Hastelloy C22 SB574 N06022	-196 (-321)	600 (1112)
Hastelloy C276 SB575 N10276	-196 (-321)	600 (1112)
Inconel Alloy SB 166 N06600	-196 (-321)	482 (900)
Inconel Alloy SB 443 N06625	-196 (-321)	400 (750)
Inconel Alloy SB 425 N08825	-182 (-296)	400 (750)
Monel Alloy SB 164 N04400 Annealed	-182 (-296)	400 (750)
Monel Alloy SB 164 N04400 Hot Worked	-253 (-423)	537 (1000)
Nickel Alloy 2200	-185 (-301)	315 (600)
Nickel Alloy 2201	-185 (-301)	400 (750)
Steel - Stainless Steel (316 & 304)	-196 (-321)	600 (1112)
Steel - Duplex Steel UNS31803 UN32205	-50 (-58)	300 (572)
Titanium SB348 R50400 Gr2	-196 (-321)	315 (600)
Zirconium SB550 R60702 (Zr)	No info	371 (700)
Zirconium SB550 R60705 (Zr +5%Nb)	No info	371 (700)

PFA, PTFE and graphite

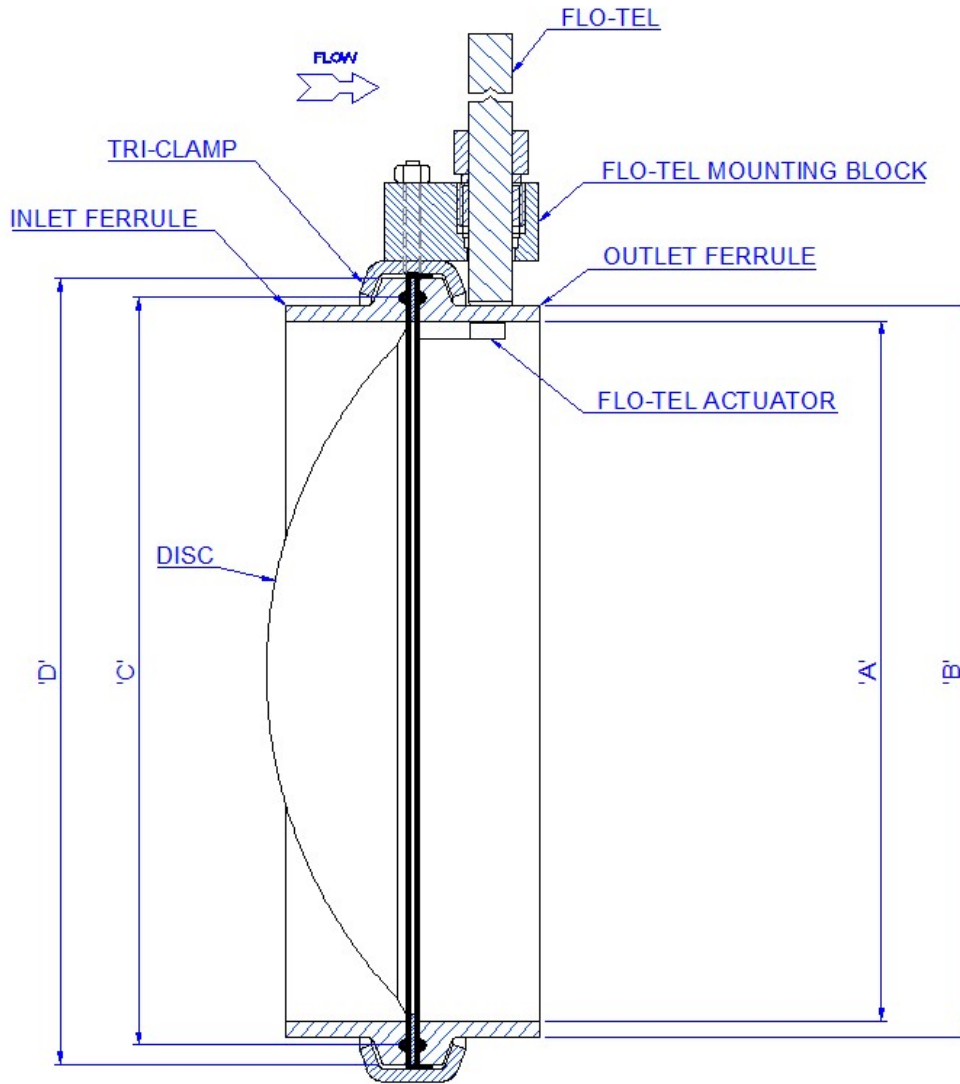
Material	Min temp	Max temp
PFA	-200 (-392)	200 (392)*
PTFE	-200 (-392)	200 (392)*
Graphite MXAS600	-50 (-58)	180 (356)

*Low temperature embrittlement is at -268°C (-450.4°F)

Standard testing ranges °C (°F)

Discs up to 200mm	-45°C (-49°F) to 450°C (842°F)
Discs up to 500mm	Ambient to 450°C (842°F)
OEM products	-75°C (-103°F) to 450°C (842°F)

Product Schematic



ISO 2852 (SMS 3017)

NB	Nominal Size	Ferrule Bore ID 'A'	Ferrule Bore OD 'B'	Gasket Pip 'C'	Ferrule Face OD 'D'
25	25	22.6	25.6	43.5	50.5
40	38	35.6	38.6	43.5	50.5
50	51	48.6	51.6	56.5	64
65	63.5	60.3	64.1	70.5	77.5
80	76.1	72.9	76.7	83.5	91
100	101.6	97.6	102.5	110	119