

Forward-Acting Scored Type POLY-SD, SCRD and SCRD-V

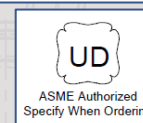
Description

Forward acting scored bursting discs use a tension failure of the disc, mechanically weakened by a scoring technique.

The disc is used in a holder specifically designed to provide a tight metal-to-metal seal.



Poly-SD



Data Sheet

Features and Benefits

- Fail-safe design
- High operating ratios
- Minimal fragmentation
- Extended cycle life
- Full vacuum rating without vacuum supports
- Liquid or gas services
- Polymerisation-proof application (Poly-SD only)
- Improved corrosion / cycle resistance

Specifications

Type of Disc	Poly-SD, SCRD and SCRD-V							
Action	Forward-Acting Scored							
Sizes	(1) (2)	DN15 - DN1100 / 1/2" - 44"						
Disc Material	(3)	Aluminium 1100	1.4401 / 1.4404 (316/316L SST)	Nickel 200/201	Monel 400	Inconel 600	Silver	
Max. Operating Temperature	121°C	482°C	427°C	482°C	593°C	121°C		
Protective Coatings	(4)	Yes						
Ratio of Operating Pressure to Minimum Burst Pressure	85%	95% (5) (6)					85%	
Cycling Duty	(6)	R	R	R	R	R	NR	
Pulsating Duty (light)	R	R	R	R	R	R	MC	
Pulsating Duty (heavy)	R	R	R	R	R	R	NR	
Full or Partial Vacuum	(7)	R	R	R	R	R	R	
Polymerisation Processes	(8)	R	R	R	R	R	R	
Hydraulic Service	R	R	R	R	R	R	R	
Non-Fragmenting	(5)	R	R	R	R	R	R	
Seat Configuration		Flat Poly-SD			Scored (30°, FS, FSR)			
Use in Flanged Holders Type BT		Yes			Yes			
Use in Union Type Holders Type UT (5)		No			No			
Use in Screw Type Holders Type ST (5)		No			Yes (30° and FS)			

R = RECOMMENDED MC = MARGINAL CONDITIONS NR = NOT RECOMMENDED

- (1) Sizes larger than DN600 (24") upon request.
- (2) Size DN1100 (44") discs are subject to availability of material.
- (3) Other materials such as Hastelloy or Tantalum available upon request. Please consult Fike.
- (4) Maximum operating temperature for various coatings: Urethane Acrylic 65°C, Urethane 120°C, fluoropolymer 230°C.
- (5) Specify upon ordering.
- (6) Discs operating at 95% should be limited to applications which do not involve extreme pressure cycling.
- (7) See detailed table with burst pressures on following page for minimum burst pressure to withstand full vacuum.
- (8) Poly-SD only. Not recommended for types SCRD and SCRD-V. Consult Fike.

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All above data are subject to change without notice. They must not be used unless confirmed in writing.

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Burst pressures in barg at 22°C ⁽¹⁾

Size		DN 15	20	25	40	50	80	100	150	200	250	300	350	400	450	500	600		
ANSI		1/2	3/4	1	1.5	2	3	4	6	8	10	12	14	16	18	20	24		
Min/Max Burst Pressure will not withstand full vacuum	1.4401 / 1.4404 (316/316L SST) 482°C	MIN	-	-	13.8	10.3	9.7	6.9	5.5	5.5	5.2	4.1	3.4	3.0	5.9	5.2	4.5	3.8	
		MAX	-	-	17.2	13.8	13.8	13.1	12.4	10.3	9.3	9.3	9.0	7.9	7.9	7.9	7.9	7.9	
	Inconel 600 593°C	MIN	20.7	13.8	9.0	6.9	6.6	5.5	4.5	4.1	3.8	3.0	2.6	2.2	4.5	3.8	3.4	3.1	
		MAX	24.1	20.7	10.7	10.3	12.4	10.3	10.3	10.3	9.0	7.9	7.6	7.6	7.6	7.6	7.6	7.6	
	Monel 400 482°C	MIN	20.7	17.2	5.2	5.5	5.2	4.8	4.1	3.8	3.8	3.0	2.6	2.2	4.5	3.8	3.4	3.1	
		MAX	24.1	20.7	12.8	9.0	11.0	9.7	9.7	8.6	7.6	6.6	6.2	6.2	6.2	6.2	6.2	6.2	
	Nickel 200/201 427°C	MIN	17.3	13.8	4.1	4.1	3.4	2.5	2.1	1.7	2.1	1.7	1.4	1.2	2.1	1.7	1.7	1.4	
		MAX	20.7	24.8	5.5	5.5	4.1	4.1	3.4	3.4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
	Hastelloy C276 482°C	MIN	42.7	36.9	27.6	25.2	25.2	-	-	-	-	-	-	-	-	-	-	-	
		MAX	69.0	51.7	48.3	41.4	29.3	-	-	-	-	-	-	-	-	-	-	-	
	Tantalum 260°C	MIN	17.2	13.8	6.9	5.5	4.1	3.1	2.8	2.4	-	-	-	-	-	-	-	-	
		MAX	24.8	16.9	10.3	9.0	8.3	7.6	6.9	6.9	-	-	-	-	-	-	-	-	
	Aluminium 1100 121°C	MIN	3.1	2.8	2.3	2.1	1.6	1.0	1.0	1.0	-	-	-	-	-	-	-	-	
		MAX	6.2	5.5	4.8	3.8	2.4	3.1	3.4	3.4	-	-	-	-	-	-	-	-	
	Silver 121°C	MIN	6.9	6.6	4.1	2.4	2.1	1.7	1.7	1.4	-	-	-	-	-	-	-	-	
		MAX	12.8	8.6	5.2	4.1	4.8	3.4	3.4	3.4	-	-	-	-	-	-	-	-	
	Min/Max Burst Pressure Will withstand full vacuum	1.4401 / 1.4404 (316/316L SST) 482°C	MIN	37.9	31.0	17.2	13.8	13.8	13.1	12.4	10.3	9.3	9.3	9.0	7.9	7.9	7.9	7.9	-
			MAX	206.8	172.4	155.1	124.1	110.3	89.6	75.8	34.5	31.0	27.6	24.1	20.7	17.2	13.8	10.3	-
Inconel 600 593°C		MIN	24.1	20.7	10.7	10.3	12.4	10.3	10.3	10.3	9.0	7.9	7.6	7.6	7.6	7.6	7.6	-	
		MAX	206.8	172.4	155.1	124.1	110.3	89.6	75.8	34.5	31.0	27.6	24.1	20.7	17.2	13.8	10.3	-	
Monel 400 482°C		MIN	24.1	20.7	12.8	9.0	11.0	9.7	9.7	8.6	7.6	6.6	6.2	6.2	6.2	6.2	6.2	6.2	
		MAX	206.8	172.4	155.1	124.1	110.3	89.6	75.8	34.5	31.0	27.6	24.1	20.7	17.2	13.8	10.3	6.9	
Nickel 200/201 427°C		MIN	20.7	17.2	5.5	5.5	4.1	4.1	3.4	3.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
		MAX	206.8	172.4	155.1	124.1	110.3	89.6	75.8	34.5	31.0	27.6	24.1	20.7	17.2	13.8	10.3	6.9	
Hastelloy C276 482°C		MIN	69.0	51.7	48.3	41.4	29.3	21.7	21.7	21.7	-	-	-	-	-	-	-	-	
		MAX	206.8	172.4	155.1	124.1	110.3	89.6	75.8	34.5	-	-	-	-	-	-	-	-	
Tantalum 260°C		MIN	24.8	16.9	10.3	9.0	8.3	7.6	6.9	6.9	-	-	-	-	-	-	-	-	
		MAX	69.0	57.4	51.7	41.4	36.7	29.9	25.3	16.0	-	-	-	-	-	-	-	-	
Aluminium 1100 121°C		MIN	6.2	5.5	4.8	3.8	2.4	3.1	3.4	3.4	-	-	-	-	-	-	-	-	
		MAX	31.0	25.9	23.3	18.6	16.5	13.4	11.4	7.2	-	-	-	-	-	-	-	-	
Silver 121°C		MIN	12.8	8.6	5.2	4.1	4.8	3.4	3.4	3.4	-	-	-	-	-	-	-	-	
		MAX	31.0	25.9	23.3	18.6	16.5	13.4	11.4	7.2	-	-	-	-	-	-	-	-	

(1) Higher burst pressures and larger sizes are available. Please consult Fike for more information.

Tolerances ⁽¹⁾

Burst Pressure in barg at 22°C	Performance Tolerance at 22°C
≤ 1.5	± 0.15 barg
1.5 < burst pressure < 2.76	stand. ± 10% / red. ± 0.15 barg
≥ 2.76	stand. ± 10% / red. ± 5%

(1) Consult Fike for possibility to reduce tolerances.

Performance tolerance as specified by ISO/EN is a total tolerance which includes both manufacturing and bursting tolerance.

As per ISO/EN the bursting discs can be marked with:

- Specified burst pressure with a performance tolerance (in % or a value).

E.g.: 10 barg at 22°C ± 10% (± 1 barg)

- Maximum and minimum burst pressure

E.g.: Max 11 barg at 22°C - min 9 barg at 22°C

On request bursting discs can be marked as per ASME code section VIII with the average burst test result and the bursting tolerance of ± 5% for burst pressures ≥ 2.76 barg, (0.15 barg for burst pressures < 2.76 barg).

Performance Attributes				Process Media			Bursting Disc Holders	
Operating ratio	Non-fragmenting	Vacuum resistance	Pulsating / cycling	Polymerisation	Liquid	Vapour / gas	Bolted type	Pretorqueable
95%	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes