



D Series Forward-Acting Composite Rupture Disks

Features

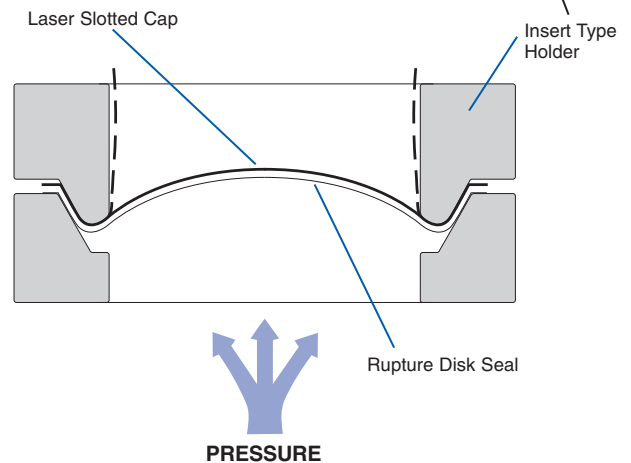
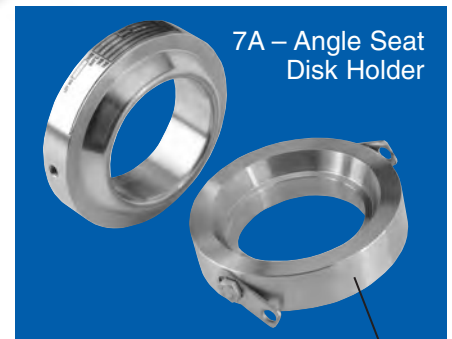
- State-of-the-art laser slotted metal top section
- Forward-acting, tension-loaded design
- Metal or TFE seal
- Fragment resistant design
- Operating pressures to 80% of the disk's marked burst pressure
- Seat Configuration: Angular 30°
- Sizes 1/2" thru 24" diameters
- Burst ratings 3 to 2500 psig
- Temperature ratings to 900°F (482°C)
- Suitable for liquid, gas or 2-phase flow
- 3-dimensional stainless steel tag is standard
- ASME UD marking available

Options

Vacuum Supports are required on vacuum services. Vacuum supports are attached to the process side of the disk and allow the disk to support a full system vacuum. Contact ZOOK if back pressures are in excess of 15 psig or cycling is present

Protective Rings are recommended with D Series Disks to protect delicate materials and/or to provide stability

Seal / Liners The design of the D Series allows the use of highly corrosive-resistant seal materials. A wide variety of metal and TFE seal materials are available



D Series Disks mount with the concave surface facing the process media. The laser cut determines the burst rating of the disk. When the D Series Disk ruptures, it opens along the predetermined pattern and folds back against the holder.

D	Slotted metal top section and a TFE or metal seal
D-R	D Disk with a protective bottom ring
R-D-R	D Disk with a top and bottom protective ring
D-V	D Disk with a bottom vacuum support
TL-D	D Disk with a PFA seal and top liner
TL-D-V	TL-D Disk designed to withstand full vacuum

Table 1 – D Series Minimum and Maximum Pressure Ratings – psig (bar) @ 72°F (22°C)

Disk Size	Type D, D-R, R-D-R, D-V, R-D-V						Maximum Burst Pressures (any Seal)
	Top Section 316SS, Nickel, Inconel or Monel						
	Minimum Burst Pressures with Listed Seal Materials						
	TFE	Aluminum	Nickel	Monel	Inconel	316SS	
1/2"	90	140	540	600	880	1100	2500
12.70 mm	6.21	9.66	37.24	41.38	60.69	75.86	172.41
3/4"	60	110	440	460	700	800	2500
19.05 mm	4.14	7.59	30.34	31.72	48.28	55.17	172.41
1"	25	60	185	240	300	400	2500
25 mm	1.72	4.14	12.76	16.55	20.69	27.59	172.41
1-1/2"	20	35	125	155	200	275	2000
40 mm	1.38	2.41	8.62	10.69	13.79	18.97	137.93
2"	15	25	80	90	120	165	1500
50 mm	1.03	1.72	5.52	6.21	8.28	11.38	103.45
3"	10	15	55	70	95	125	1000
80 mm	0.69	1.03	3.79	4.83	6.55	8.62	68.97
4"	8	12	40	50	75	90	900
100 mm	0.55	0.83	2.76	3.45	5.17	6.21	62.07
6"	6	10	35	40	60	75	700
150 mm	0.41	0.69	2.41	2.76	4.14	5.17	48.28
8"	5	8	25	35	40	60	600
200 mm	0.34	0.55	1.72	2.41	2.76	4.14	41.38
10"	4	7	22	30	30	45	500
250 mm	0.28	0.48	1.52	2.07	2.07	3.1	34.48
12"	3	7	19	25	25	40	400
300 mm	0.21	0.48	1.31	1.72	1.72	2.76	27.59
Max. Temp.	500°F (260°C)	600°F (316°C)	800°F (427°C)	900°F (482°C)	900°F (482°C)	900°F (482°C)	

Note: For sizes, burst ratings and temperatures not shown, contact ZOOK

MONEL - TM Huntington Alloys
INCONEL - TM International Nickel

Table 2 – TL-D Series Minimum and Maximum Pressure Ratings – psig (bar) @ 72°F (22°C)

Disk Size	TL-D		TL-D-V			
	Top Section 316SS, Nickel, Inconel or Monel		Top Section			
	Seal Material: TFE		316SS		Nickel	
	min.	max.	min.	max.	min.	max.
1"	50	1000	80	1000	80	600
25 mm	3.45	68.97	5.52	68.97	5.52	41.38
1-1/2"	40	700	75	700	75	450
40 mm	2.76	48.28	5.17	48.28	5.17	31.03
2"	25	550	35	550	35	395
50 mm	1.72	37.93	2.41	37.93	2.41	27.24
3"	20	450	25	450	25	315
80 mm	1.38	31.03	1.72	31.03	1.72	21.72
4"	15	410	18	410	18	300
100 mm	1.03	28.28	1.24	28.28	1.24	20.69
6"	10	320	14	320	14	225
150 mm	0.69	22.07	0.97	22.07	0.97	15.52
8"	7.5	290	11	290	11	200
200 mm	0.52	20.00	0.76	20.00	0.76	13.79
10"	5	240	8	240	8	160
250 mm	0.34	16.55	0.55	16.55	0.55	11.03
12"	5	200	8	200	8	140
300 mm	0.34	13.79	0.55	13.79	0.55	9.66
Max. Temp.	500°F (260°C)		500°F (260°C)		500°F (260°C)	

Note: For sizes, burst ratings and temperatures not shown, contact ZOOK

Table 3 – Manufacturing Range/Burst Tolerance – psig (bar) @ 72°F (22°C)

Specified burst rating psig (bar)	Manufacturing Range (psi)		Burst Tolerance
	minus	plus	
2.5 (0.17) to below 4 (0.28)	1	1	▲
4 (0.28) to below 7 (0.48)	1	2	
7 (0.48) to below 11 (0.76)	1.5	2.5	
11 (0.76) to below 15 (1.03)	2	3	
15 (1.03) to below 17 (1.17)	2	3	± 2 psi (0.14 bar)
17 (1.17) to below 26 (1.79)	2	4	
26 (1.79) to below 40 (2.76)	3	5	± 5%
40 (2.76) to below 66 (4.55)	4	6	
66 (4.55) to below 101 (6.97)	5	9	
101 (6.97) to below 151 (10.41)	6	12	
151 (10.41) to below 201 (13.86)	9	16	
201 (13.86) to below 351 (24.21)	12	23	
351 (24.21) to below 500 (34.48)	15	30	
over 500 (34.48)	3%	6%	

▲ Contact ZOOK

Table 3 – notes

- 1/2, 1/4, and 0% Manufacturing Ranges are available.
- Burst tolerances are the maximum expected variation from the marked burst rating on disk tag



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