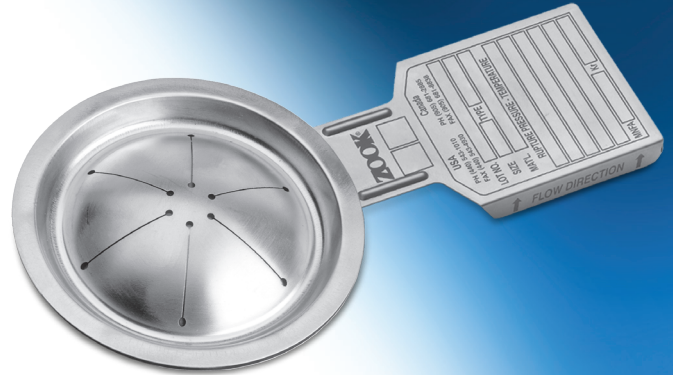




# D Series Forward-Acting Composite Metal Rupture Disks

## Features

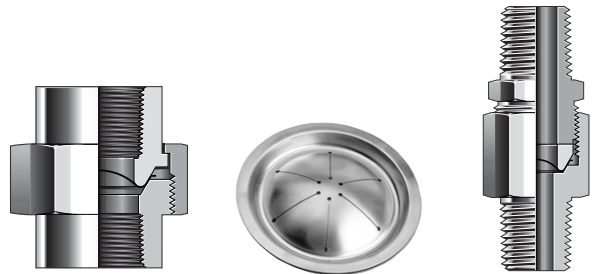
- The D Series is a slotted metal top section and allows the use of metal & teflon seal materials. A wide variety of corrosive resistant seal materials are available.
- State-of-the-art laser slotted metal burst cap
- Operating ratios up to 85% of the low end of burst tolerance
- Disk design offers high cycle life
- Excellent for liquid, gas or 2 phased flow
- Wide range of standard and exotic materials available
- Sizes from 1/2" (13mm) through 24" (600mm)
- Burst ratings from 3 psig (0.21 barg) to 2500 psig (172.37 barg)
- 3-dimensional stainless steel tag permanently engraved with complete disk specifications
- ASME, CE (PED), and TÜV compliance available



## Options

- D-V & **Vacuum Supports** are required on vacuum services.  
TLDV Vacuum supports allow the disk to support full system vacuum
- D-R & **Protective Rings** are recommended with R-D-R D Series disks to protect delicate materials and/or to provide stability when vacuum supports are not supplied
- D-H **Handling Supports** are attached to the process side of the disk to protect disk seals when vacuum supports are not supplied
- L-D & **Atmospheric liners** add extra protection against TLVDV corrosive process conditions downstream of the disk

D Series disk mounts into 7A - Angle Seat disk holder (refer to 7A - Angle Seat data sheet)



Contact ZOOK for Union & Screw-type options



# D Series Specifications

## D Series Minimum and Maximum Pressure Ratings psig (barg) @ 72°F (22°C)

Disk Size	Minimum Burst Pressures with Listed Seal Materials									
	Top Section 316SS, Nickel, Inconel, Monel or Hastelloy C276							Maximum Burst Pressures (Any Seal)	MNFA in <sup>2</sup> (mm <sup>2</sup> )	
	316	Inconel	Monel	Nickel	Hastelloy C276	Aluminum	PFA		D DUT	D-V DUT-V
1/2"	1100	880	600	540	1100	140	90	2500	0.17	0.13
12.70 mm	75.86	60.69	41.38	37.24	75.86	9.66	6.21	172.41	109	83.87
3/4"	800	700	460	440	800	110	60	2500	0.44	0.35
19.05 mm	55.17	48.28	31.72	30.34	55.17	7.59	4.14	172.41	283	225
1"	400	300	240	185	400	60	25	2500	0.71	0.51
25 mm	27.59	20.69	16.55	12.76	27.59	4.14	1.72	172.41	458	329
1-1/2"	275	200	155	125	275	35	20	2000	1.54	1.05
40 mm	18.97	13.79	10.69	8.62	18.97	2.41	1.38	137.93	993	677
2"	165	120	90	80	165	25	15	1500	3.36	3.19
50 mm	11.38	8.28	6.21	5.52	11.38	1.72	1.03	103.45	2167	2058
3"	125	95	70	55	125	15	10	1000	7.39	7.02
80 mm	8.62	6.55	4.83	3.79	8.62	1.03	0.69	68.97	4767	4529
4"	90	75	50	40	90	12	8	900	12.73	12.18
100 mm	6.21	5.17	3.45	2.76	6.21	0.83	0.55	62.07	8212	7858
6"	75	60	40	35	75	10	6	700	28.27	21.76
150 mm	5.17	4.14	2.76	2.41	5.17	0.69	0.41	48.28	18238	14038
8"	60	40	35	25	60	8	5	600	50.01	35.92
200 mm	4.14	2.76	2.41	1.72	4.14	0.55	0.34	41.38	32264	23174
10"	45	30	30	22	45	7	4	500	78.54	57.96
250 mm	3.1	2.07	2.07	1.52	3.1	0.48	0.28	34.48	50670	37393
12"	40	25	25	19	40	7	3	400	113.10	85.54
300 mm	2.76	1.72	1.72	1.31	2.76	0.48	0.21	27.59	72967	55186
Max. Seal Temp.	900°F (482°C)	900°F (482°C)*	800°F (427°C)	750°F (399°C)	900°F (482°C)	600°F (316°C)	500°F (260°C)			

Notes: \* Contact ZOOK for higher temperatures  
• For sizes, burst ratings and temperatures not shown, contact ZOOK.

### Table Tolerance

Table Tolerance - ZOOK and ASME										Table Tolerance - PED						
Burst Pressure Range (psig)		ZOOK and ASME Manufacturing Design Range (psig)								Burst Tolerance	Burst Pressure Range (barg)		Total Performance Tolerance			
		Standard		Reduced Tolerance				Minimum	Maximum				Standard	Reduced Tolerance		
		Minus	Plus	Minus	Plus	Minus	Plus							Minus	Plus	Good
Min	<1.0	0	0.3	0.00	0.15	0.00	0.08	0.00	0.00	± 0.25 psig	Min	<0.069	±75%	±73%	±70%	±0.017 barg
1.0	<2.5	0.5	0.5	0.25	0.25	0.13	0.13	0.00	0.00	± 0.33 psig	0.069	<0.172	±65%	±45%	±35%	±0.023 barg
2.5	<4.0	1	1	0.50	0.50	0.25	0.25	0.00	0.00	± 0.5 psig	0.172	<0.276	±50%	±30%	±20%	±0.035 barg
4.0	<7.0	1	2	0.50	1.00	0.25	0.50	0.00	0.00	± 0.5 psig	0.276	<0.483	±50%	±30%	±20%	±0.035 barg
7.0	<11.0	1.5	2.5	0.75	1.25	0.38	0.63	0.00	0.00	± 0.8 psig	0.483	<0.759	±50%	±30%	±20%	±0.055 barg
11.0	<15.0	2	3	1.00	1.50	0.50	0.75	0.00	0.00	± 1.3 psig	0.759	<1.034	±25%	±20%	±15%	±0.090 barg
15.0	<17	2	3	1.00	1.50	0.50	0.75	0.00	0.00	± 2.0 psig	1.034	<1.172	±25%	±20%	±15%	±0.138 barg
17	<26	2	4	1.00	2.00	0.50	1.00	0.00	0.00	± 2.0 psig	1.172	<1.793	±25%	±20%	±15%	±0.138 barg
26	<40	3	5	1.50	2.50	0.75	1.25	0.00	0.00	± 2.0 psig	1.793	<2.758	±20%	±15%	±10%	±0.138 barg
40	<66	4	6	2.00	3.00	1.00	1.50	0.00	0.00	± 5%	2.758	<4.552	±15%	±10%	±7.5%	±5%
66	<101	5	9	2.50	4.50	1.25	2.25	0.00	0.00	± 5%	4.552	<6.966	±15%	±10%	±7.5%	±5%
101	<151	6	12	3.00	6.00	1.50	3.00	0.00	0.00	± 5%	6.966	<10.412	±10%	±7.5%	±6.5%	±5%
151	<201	9	16	4.50	8.00	2.25	4.00	0.00	0.00	± 5%	10.412	<13.859	±10%	±7.5%	±6.5%	±5%
201	<351	12	23	6.00	11.50	3.00	5.75	0.00	0.00	± 5%	13.859	<24.201	±10%	±7.5%	±6.5%	±5%
351	<500	15	30	7.50	15.00	3.75	7.50	0.00	0.00	± 5%	24.201	<34.474	±10%	±7.5%	±6.5%	±5%
500	Max	3%	6%	1.5%	3.0%	0.75%	1.5%	0.00	0.00	± 5%	34.474	Max	±10%	±7.5%	±6.5%	±5%

### Certified Flow Resistance Factors

Disk Type	Krgl
D	2.40
D-V & TLDV	6.21

Teflon - TM The Chemours Company  
Inconel - TM Special Metals Corporation  
Monel - TM Special Metals Corporation  
Hastelloy - TM Haynes International



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