



# FDZ Series Forward-Acting Composite Rupture Disks

## Features

- State-of-the-art laser slotted metal top section
- Forward-acting, tension-loaded design
- Metal or Teflon seal
- Fragment resistant design
- Operating pressures to 80% of the disk's marked burst pressure
- Seat Configuration: Flat Seat
- Sizes 1/2" thru 30" diameters
- Burst ratings 3 to 2500 psig
- Temperature ratings to 1000°F (538°C)
- Suitable for liquid, gas or 2-phase flow
- 3-dimensional stainless steel tag is standard
- CE & TUV markings available



## Options

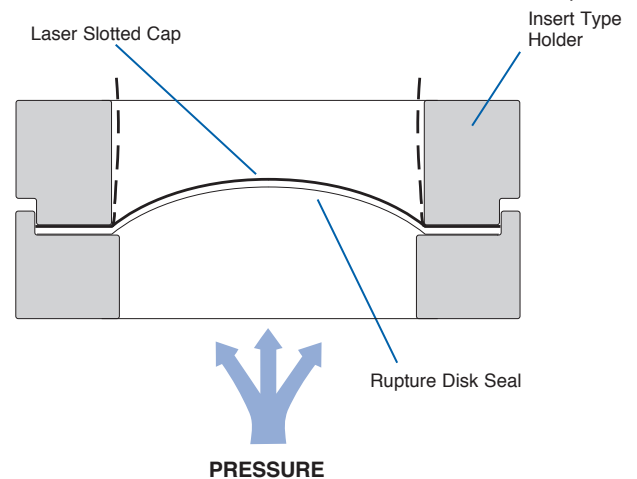
**Vacuum Supports** are required on vacuum services. Vacuum supports are attached to the process side of the disk and allow the disk to support a full system vacuum.

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

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

**Handling Supports** are attached to the process side of the disk to protect disk seals

## Integral Burst Indication



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

<b>FDZ</b>	Slotted metal top section and a TFE or metal seal
<b>FDZ-R</b>	FDZ Disk with a protective bottom ring
<b>R-FDZ-R</b>	FDZ Disk with a top and bottom protective ring
<b>FDZ-V</b>	FDZ Disk with a bottom vacuum support
<b>FDZ-H</b>	FDZ Disk with a bottom handling support

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

Disk Size	Type FDZ, FDZ-R, R-FDZ-R, FDZ-V, R-FDZ-V						Maximum Burst Pressures (any Seal)
	Top Section 316SS, Nickel, Inconel or Monel						
	Minimum Burst Pressure 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
<b>Max. Temp.</b>	<b>500°F (260°C)</b>	<b>600°F (316°C)</b>	<b>800°F (427°C)</b>	<b>900°F (482°C)</b>	<b>1000°F (538°C)</b>	<b>900°F (482°C)</b>	

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

MONEL - TM Huntington Alloys  
INCONEL - TM International Nickel

Table 2 – Manufacturing Range/Burst Tolerance – psig (bar) @ 72°F (22°C)

Specified Burst Rating psig (bar)		North American Approach		Burst Tolerance (psi)	European Approach Percentage Performance Tolerance (%)
		Manufacturing Design Range (psi)			
Minimum	Maximum	minus	plus		
0.36 (0.02)	<1.0 (<0.07)	0	0.3	± 0.25	± 75%
1.0 (0.07)	<2.5 (<0.17)	0.5	0.5	± 0.33	± 65%
2.5 (0.17)	<4.0 (<0.28)	1	1	± 0.33	± 50%
4.0 (0.28)	<7.0 (<0.48)	1	2	± 0.5	± 50%
7.0 (0.48)	<11.0 (<0.76)	1.5	2.5	± 0.8	± 50%
11.0 (0.76)	<15.0 (<1.03)	2	3	± 1.3	± 25%
15.0 (1.03)	<17 (<1.17)	2	3	± 2.0	± 25%
17 (1.17)	<26 (<1.79)	2	4	± 2.0	± 25%
26 (1.79)	<40 (<2.76)	3	5	± 2.0	± 20%
40 (2.76)	<66 (<4.55)	4	6	± 5%	± 15%
66 (4.55)	<101 (<6.97)	5	9	± 5%	± 15%
101 (6.97)	<151 (<10.41)	6	12	± 5%	± 10%
151 (10.41)	<201 (<13.86)	9	16	± 5%	± 10%
201 (13.86)	<351 (<24.21)	12	23	± 5%	± 10%
351 (24.21)	<500 (<34.48)	15	30	± 5%	± 10%
500 (34.48)	Max	3%	6%	± 5%	± 10%

Table 2 – notes

- Reduced Manufacturing Ranges and performance tolerances are available.
- Burst tolerances are the maximum expected variation from the marked burst rating on disk tag
- Percentage Performance Tolerance includes MDR



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