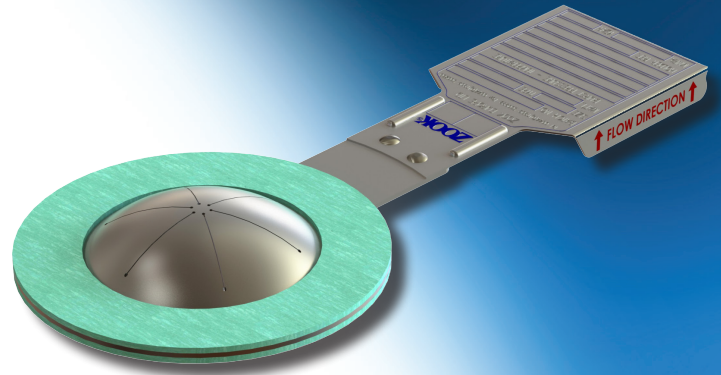




FD Series Flange Mounted Forward-Acting Composite Metal Rupture Disks

Features

- The FD Series has 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
- Disk design offers high cycle life
- Operating ratios up to 85% of the low end of burst tolerance
- Excellent for liquid, gas or 2 phased flow
- Flange mounted - no holder required, c/w Compressed fiber gaskets (Other gasket materials available)
- Sizes from 1" (25 mm) to 44" (1100 mm)
- Burst ratings from 1 psig (0.07 barg) to 285 psig (19.5 barg)
- 3-dimensional stainless steel tag permanently engraved with complete disk specifications
- CE (PED), and TÜV compliance available

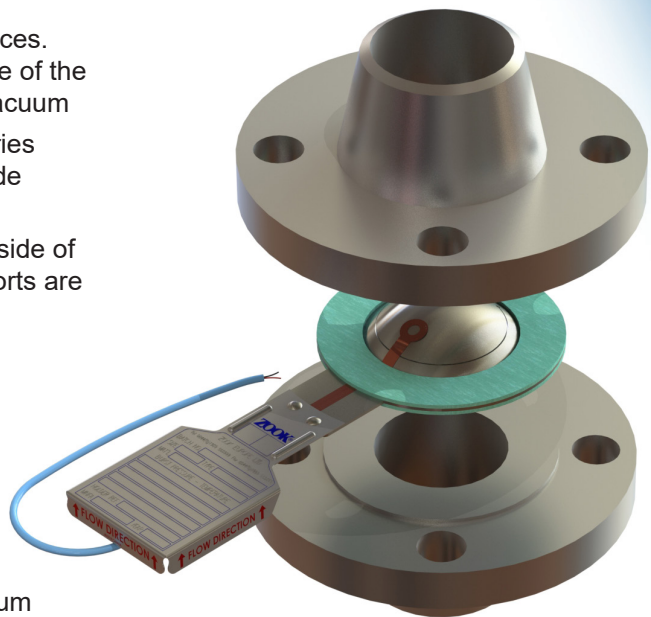


Options

- FD-V **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
- FD-R **Protective Rings** are recommended with FD Series disks to protect delicate materials and/or to provide stability when vacuum supports are not supplied
- FD-H **Handling Supports** are attached to the process side of the disk to protect disk seals when vacuum supports are not supplied
- FD-BI Equipped with ZOOK's Integral **Burst Indicator**

Ordering Information

- Always consult the factory with your complete flange specifications to determine if tooling is available. Minimum Flange requirements: Type, Size, Pressure Rating, Standard, and I.D.
- Customer's must have flexibility in their piping to facilitate installation & removal of the rupture disk, proving sufficient clearance of the disks dome.
- If the flange I.D. cannot be confirmed or the piping is rigid ZOOK can supply a reusable outlet spacer ring.



Typical Installation



FD Series Specifications

Minimum and Maximum Pressure Ratings with Teflon Seal - psig (barg) @ 72°F (22°C)

Disk Size	Minimum Burst Pressure	Maximum Burst Pressure	MNFA In ² (mm ²)	
			FD-R	FD-V
1"	30	285	0.86	0.78
25 mm	2.07	19.65	554	503
1.5"	14	285	2.04	1.33
40 mm	0.96	19.65	1316	858
2"	10	285	3.36	3.02
50 mm	0.69	19.65	2167	1948
2.5"	8	285	4.79	4.31
65 mm	0.55	19.65	3090	2780
3"	7	285	7.39	6.65
80 mm	0.48	19.65	4767	4290
4"	6	285	12.73	11.46
100 mm	0.41	19.65	8212	7393
5"	6	260	19.03	19.03
125 mm	0.41	17.93	12277	12277
6"	6	230	28.89	26.00
150 mm	0.41	15.86	18638	16774
8"	5	200	50.03	45.02
200 mm	0.34	13.79	32277	29045
10"	2	175	78.85	70.97
250 mm	0.14	12.07	50870	45787
Max. Temp.	500°F (260°C)			

Disk Size	Minimum Burst Pressure	Maximum Burst Pressure	MNFA In ² (mm ²)	
			FD-R	FD-V
12"	2	150	113.10	101.79
300 mm	0.14	10.34	72967	65670
14"	1	120	137.89	124.10
350 mm	0.07	8.27	88961	80064
16"	1	100	182.65	164.39
400 mm	0.07	6.89	117838	106057
18"	1	80	233.71	210.33
450 mm	0.07	5.52	150780	135696
20"	1	70	291.04	261.94
500 mm	0.07	4.83	187767	168993
24"	1	60	424.56	382.10
600 mm	0.07	4.14	273909	246515
26"	1	55	500.74	450.67
650 mm	0.07	3.79	323057	290754
28"	1	50	583.21	524.89
700 mm	0.07	3.45	376261	338638
30"	1	50	671.96	604.76
750 mm	0.07	3.45	433519	390166
32"	1	50	766.99	690.29
800 mm	0.07	3.45	494831	445347
Max. Temp.	500°F (260°C)			

Disk Size	Minimum Burst Pressure	Maximum Burst Pressure	MNFA In ² (mm ²)	
			FD-R	FD-V
34"	1	50	868.31	781.48
850 mm	0.07	3.45	560196	504179
36"	1	40	975.91	878.32
900 mm	0.07	2.76	629615	566656
38"	1	40	1089.79	980.81
950 mm	0.07	2.76	703088	632779
40"	1	40	1209.95	1088.96
1000 mm	0.07	2.76	780614	702553
42"	1	40	1336.40	1202.76
1050 mm	0.07	2.76	862194	775972
44"	1	40	1469.14	1322.22
1100 mm	0.07	2.76	947828	853043
Max. Temp.	500°F (260°C)			

Notes: • For materials, sizes, burst ratings and temperatures not shown, contact ZOOK
 • Maximum temperature rating for rupture disk equipped with BI is 400°F (204°C)

Table Tolerance

Table Tolerance - ZOOK										Table Tolerance - PED						
Burst Pressure Range (psig)		ZOOK Manufacturing Design Range (psig)								Burst Tolerance	Burst Pressure Range (barg)		Total Performance Tolerance			
		Standard		Reduced Tolerance				Minimum	Maximum				Standard	Reduced Tolerance		
		Minus	Plus	Half	Quarter	Zero	Good				Better	Best				
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%



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