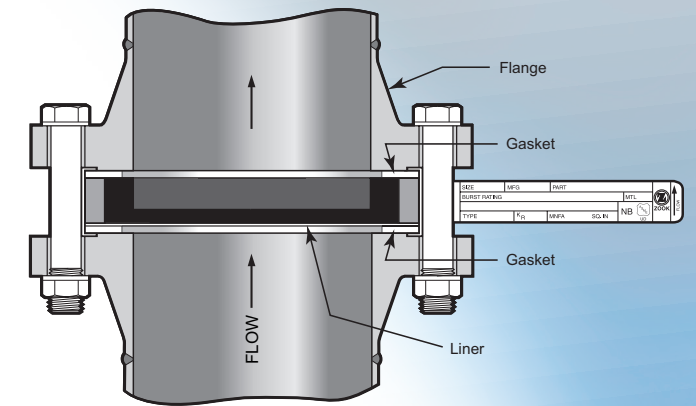


Duplex Type Graphite Rupture Disks

Duplex Type Graphite Rupture Disks

Features

- The best choice for applications involving highly oxidizing agents and halogens
- Disks extend corrosion resistance by utilizing a liner on the flat surface of the disk that contacts the process media
- Disks are capable of resisting virtually any corrosive except elemental free fluorine
- Sizes 1/2" (13 mm) thru 24" (610 mm) diameters
- Designed to fit industry standard flanges ASME B16.5, ISO and JIS
- Burst ratings 0.50 psig (0.03 barg) to 1000 psig (68.95 barg) or higher
- 0% manufacturing range
- Operating pressures to 90% of the disk's marked burst pressure. Contact ZOOK for operating ratio for burst pressures below 40 psig (2.76 barg)
- Temperature ratings -290°F to +700°F (-143°C to +371°C) Maximum temperature rating without insulation is 430°F (221°C) or 700°F (371°C) with insulation. Contact ZOOK for higher temperature ratings. The specified temperature shall be at the disk location at the time when the disk is expected to rupture
- External type vacuum supports are available for vacuum service (Contact ZOOK when vacuum is present)
- All flange group 2 disks are armored
- Liners available: PTFE (Standard Liner), PFA and FEP. Contact ZOOK for further materials available
- ASME (UD) and PED (CE) compliance available



Certified Flow Resistance Factor (Krgl)

Krgl	0.64
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Specifications

Disk Size			MNFA				Thickness*				Outside Diameter																Burst Ratings																												
NPS	DN	Actual ID	Full Bore		w/ External Vacuum Support		(Flange Group 1)		(Flange Group 2)		ASME B16.5 Class						DIN & ISO				ISO ONLY		JIS				Min Pressure (All Flanges)	Max Pressure (Flange Group 1)	Max Pressure (Flange Group 2)																										
			in	mm	in	mm	in	mm	Standard Disk	Insulated Unit	Standard Disk	Insulated Unit	150	300	600	PN6	PN10	PN16	PN25	PN40	PN20	PN50	5K	10K	16K	20K				30K																									
1/2	13	15	0.62	15.7	0.30	193	-	-	0.63	16.0	1.75	44.4	0.63	16.0	1.75	44.4	1.75	44.4	2.00	50.8	2.00	50.8	1.73	43.9	2.01	51.0	2.01	51.0	2.01	51.0	2.01	51.0	1.75	44.4	2.00	50.8	1.89	48.0	2.17	55.1	2.17	55.1	2.17	55.1	2.40	60.9	25.00	1.72	▲	▲	▲	▲			
3/4	19	20	0.82	20.8	0.53	341	-	-	0.63	16.0	1.75	44.4	0.63	16.0	1.75	44.4	2.13	54.1	2.50	63.5	2.50	63.5	2.13	54.1	2.40	60.9	2.40	60.9	2.40	60.9	2.13	54.1	2.50	63.5	2.09	53.0	2.36	59.9	2.36	59.9	2.36	59.9	2.60	66.0	25.00	1.72	▲	▲	▲	▲					
1	25	25	1	25.4	0.78	503	0.34	219	0.88	22.3	2.25	57.1	1.00	25.4	2.50	63.5	2.50	63.5	2.75	69.8	2.75	69.8	2.52	64.0	2.80	71.1	2.80	71.1	2.80	71.1	2.50	63.5	2.75	69.8	2.48	62.9	2.80	71.1	2.80	71.1	2.80	71.1	2.99	75.9	10.00	0.69	▲	▲	▲	▲					
1-1/2	38	40	1.50	38.1	1.76	1,135	0.76	490	0.88	22.3	2.25	57.1	1.00	25.4	2.50	63.5	3.25	82.5	3.63	92.2	3.63	92.2	3.39	86.1	3.62	91.9	3.62	91.9	3.62	91.9	3.25	82.5	3.63	92.2	3.15	80.0	3.39	86.1	3.39	86.1	3.39	86.1	3.82	97.0	7.00	0.48	▲	▲	▲	▲					
2	50	50	2	50.8	3.14	2,025	1.36	877	0.88	22.3	2.25	57.1	1.00	25.4	2.50	63.5	4.00	101.6	4.25	107.9	4.25	107.9	3.78	96.0	4.21	106.9	4.21	106.9	4.21	106.9	4.00	101.6	4.25	107.9	3.54	89.9	3.98	101.0	3.98	101.0	3.98	101.0	4.37	111.0	3.00	0.21	▲	▲	500.00	34.47					
2-1/2	64	65	2.50	63.5	4.78	3,083	2.58	1,664	0.88	22.3	2.25	57.1	1.00	25.4	2.50	63.5	4.75	120.6	5.00	127.0	5.00	127.0	4.59	116.5	5.00	127.0	5.00	127.0	5.00	127.0	4.75	120.6	5.00	127.0	4.52	114.8	4.76	120.9	4.76	120.9	4.76	120.9	5.39	136.9	3.00	0.21	▲	▲	500.00	34.47					
3	76	80	3	76.2	7.06	4,554	3.87	2,496	0.88	22.3	2.25	57.1	1.25	31.7	3.00	76.2	5.25	133.3	5.75	146.0	5.75	146.0	5.20	132.0	5.59	141.9	5.59	141.9	5.59	141.9	5.25	133.3	5.75	146.0	4.96	125.9	5.16	131.0	5.39	136.9	5.39	136.9	5.79	147.0	2.00	0.14	▲	▲	500.00	34.47					
4	102	100	4	101.6	12.56	8,103	5.77	3,722	0.88	22.3	2.25	57.1	1.25	31.7	3.00	76.2	6.75	171.4	7.00	177.8	-	-	5.98	151.8	6.38	162.0	6.38	162.0	6.61	167.8	6.61	167.8	6.75	171.4	7.00	177.8	5.75	146.0	6.14	155.9	6.38	162.0	6.38	162.0	6.69	169.9	1.50	0.10	250.00	17.24	500.00	34.47			
5	127	125	5	127.0	19.63	12,664	8.39	5,412	0.88	22.3	2.25	57.1	1.25	31.7	3.00	76.2	7.75	196.8	8.28	210.3	-	-	7.16	181.8	7.55	191.7	7.55	191.7	7.64	194.0	7.64	194.0	7.75	196.8	8.38	212.8	7.12	180.8	7.36	186.9	7.87	199.9	7.87	199.9	8.07	204.9	1.50	0.10	170.00	11.72	450.00	31.03			
6	152	150	6	152.4	28.27	18,238	14.78	9,535	0.88	22.3	2.25	57.1	1.75	44.4	4.00	101.6	8.63	219.2	9.75	247.6	-	-	8.15	207.0	8.58	217.9	8.58	217.9	8.82	224.0	8.82	224.0	8.63	219.2	9.75	247.6	8.31	211.0	8.54	216.9	9.25	234.9	9.25	234.9	9.76	247.9	1.00	0.07	170.00	11.72	450.00	31.03			
8	203	200	8	203.2	50.02	32,270	25.81	16,651	1.13	28.7	2.75	69.8	2.25	57.1	5.00	127.0	10.88	276.3	12.00	304.8	-	-	10.31	261.8	10.75	273.0	10.75	273.0	11.18	283.9	11.42	290.0	10.88	276.3	12.00	304.8	10.12	257.0	10.51	266.9	11.20	284.4	11.20	284.4	11.54	293.1	0.75	0.05	170.00	11.72	450.00	31.03			
10	254	250	10	254.0	78.53	50,664	32.70	21,096	1.50	38.1	3.38	85.8	-	-	-	-	13.25	336.5	-	-	-	-	12.48	316.9	12.91	327.9	12.95	328.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	150.00	10.34	-	-			
12	305	300	12	304.8	113.09	72,961	47.24	30,477	2.00	50.8	4.38	111.2	-	-	-	-	16.00	406.4	-	-	-	-	14.69	373.1	14.88	377.9	15.12	384.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	150.00	10.34	-	-		
14	356	350	13.25	336.5	137.88	88,954	-	-	2.25	57.1	4.88	123.9	-	-	-	-	17.63	447.8	-	-	-	-	16.65	422.9	17.24	437.9	17.48	443.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	150.00	10.34	-	-		
16	406	400	15.25	387.3	182.65	117,838	-	-	2.50	63.5	5.38	136.6	-	-	-	-	20.13	511.3	-	-	-	-	18.62	472.9	19.25	488.9	19.49	495.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	150.00	10.34	-	-	
18	457	450	17.25	438.1	233.70	150,773	-	-	2.75	69.8	5.88	149.3	-	-	-	-	21.50	546.1	-	-	-	-	20.79	528.0	21.22	538.9	21.85	554.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	■	■	-	-	
20	508	500	19.25	488.9	291.03	187,760	-	-	3.00	76.2	6.38	162.0	-	-	-	-	23.75	603.2	-	-	-	-	22.76	578.1	23.39	594.1	24.29	616.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	■	■	-	-	
24	610	600	23.25	590.5	424.55	273,902	-	-	3.00	76.2	6.38	162.0	-	-	-	-	28.13	714.5	-	-	-	-	26.73	678.9	27.36	694.9	28.90	734.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50	0.03	■	■	-	-

Notes:
 *Standard disk thickness does not include gaskets. Insulated unit thickness includes all gaskets
 ▲ Max pressure based on max design Pressure/Temperature of companion flanging selected
 ■ Contact ZOOK
 • Disks w/pressure ratings of 25 psig (1.72 barg) and above will support full vacuum w/o additional support
 • Contact ZOOK Engineering for applications with less than full vacuum or Back-Pressure
 • Maximum pressure rating of ASME B16.5 Class 150 flanges is 290 psig (19.99 barg) @ 100°F (38°C). ASME B16.5 Class 300 flanges is 750 psig (51.71 barg) @ 100°F (38°C). The maximum pressure rating is lower at higher temperatures. Reference ASME/ANSI B16.5
 • All pressures shown are based on an ambient temperature of 72°F (22°C)
 • Not all minimum/maximum pressure and temperature combinations are available. Please contact ZOOK for more information
 • Unless otherwise noted, stated MNFA and Kr values apply to the rupture disk only and does not include the addition of external vacuum supports or insulated units