

Description

FIKE's HO/HOV Series Composite Rupture Disk utilizes the standard 30° angular seat design.

FIKE's HO Rupture Disc is a composite disc consisting of two components, the seal member and a slotted top. In this configuration the slotted top section contains the seal and the seal transmits the pressure load to the top section. The slotted top section controls the burst pressure of the disc and allows the use of Teflon as a seal member. In addition to the typical seal materials available (See Table 1) tantalum, titanium or other precious metals may be used when dealing with corrosive media. With the HO configuration a smaller amount of precious material is required since the top section controls the burst pressure. The HOV Rupture Disc is constructed the same as the HO

HO/HOV Series

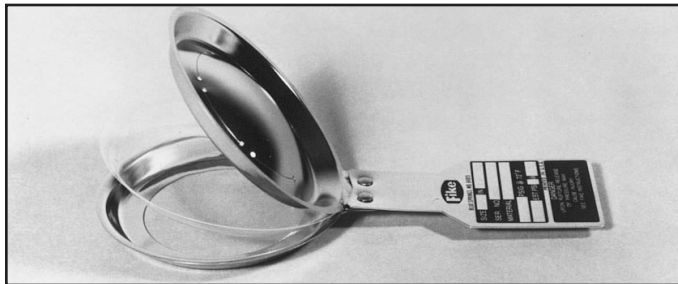
Disc with the addition of a vacuum support under the seal member (HOV stands for High Operating & Vacuum).

To order a HO/HOV Series Rupture Disc specify: type, size, desired burst pressure at coincident temperature, materials of construction, linings and/or coatings desired for each of the disc members and type of flange installation used (bolted, union).

When reordering discs specify the type of disc and the serial number from the one being replaced.



HOV Disc (before & after rupture)



HO Disc with Teflon Seal



Typical Flange with HOV Rupture Disc

Data

TYPE OF DISC	HO PLHO TEFLON SEAL ONLY				HOV PLHOV TEFLON SEAL ONLY			
	TOP MATERIAL SST • NI • MO • INC •							
AVAILABLE SIZE RANGE NOTE 6	1" TO 44" (DN25 to DN1100) ⁶							
DISC MATERIAL	SEAL							
	TEFLON	ALUM	SST	NI	MO	INC	SILVER	
PROTECTIVE COATINGS AVAILABLE NOTE 3	YES ON METALLIC COMPONENTS ONLY							
RATIO OF OPERATING PRESSURE TO STAMPED BURST PRESSURE	60%	R	R	R	R	R	R	R
	70%	R	R	R	R	R	R	R
	80%	MC ¹	MC ¹	MC ¹	MC ¹	MC ¹	MC ¹	MC ¹
	90%	NR	NR	NR	NR	NR	NR	NR
CYCLIC DUTY (POS. TO NEG.)	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	
LIGHT PULSATING DUTY	R	R	R	R	R	R	R	
HEAVY PULSATING DUTY	R	MC	R	R	R	R	MC	
FULL OR PARTIAL VACUUM RATING	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	R _{HOV}	
POLYMERIZATION PROCESS	NR	NR	NR	NR	NR	NR	NR	
HYDRAULIC SERVICE	R	R	R	R	R	R	R	
NON-FRAGMENTING DISC (SPECIFY WHEN ORDERING)	MC ⁴	MC ⁴	MC ⁴	MC ⁴	MC ⁴	MC ⁴	MC ⁴	
SEAT CONFIGURATION NOTE 5	30°	30°	30°	30°	30°	30°	30°	
MAY BE USED IN: BOLTED TYPE ASSY.	YES	YES	YES	YES	YES	YES	YES	
UNION TYPE ASSY.	YES	YES	YES	YES	YES	YES	YES	
SCREW TYPE ASSY.	NO	NO	NO	NO	NO	NO	NO	

R RECOMMENDED **MC** MARGINAL CONDITIONS **NR** NOT RECOMMENDED

- Advise special condition when ordering
- Burst pressure over 1,000 PSI (68.95 barg) suitable
- Maximum temperature for various coatings: urethane 250°F (121°C), urethane acrylic 150°F (66°C), and teflon 500°F (26°C)
- Consult factory
- Above 24" diameter (DN 600) all discs are flat seat
- Discs larger than 24" (DN600) Consult factory.

TABLE 1

HO/HOV Series Rupture Disc Burst Pressures¹ @ 72°F/22°C

Seal Member	Size ²	In. DN	1 25	1½ 40	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	
Teflon ³ Max. Temp. 500°F/260°C	Min. ⁴ Max.	31.6	23	15	12	8	6	4.5	3.6	3	2.6	2.3	2	1.8	1.5	1.5	
		2.18	1.6	1.0	0.8	0.6	0.4	0.31	0.25	0.21	0.18	0.16	0.14	0.12	0.10	0.10	0.10
		465	305	200	140	105	80	70	65	55	50	45	40	35	40	40	40
			32.0	21.0	13.7	9.65	7.24	5.51	4.82	4.48	3.79	3.44	3.10	2.75	2.41	2.75	2.75
Aluminum Max. Temp. 600°F/316°C	Min. ⁴ Max.	51	35	23	15	12	11	8	6	4	4	4	4	4	4	4	
		3.5	2.4	1.6	1.0	0.8	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
		1500	1500	1125	750	600	450	338	263	225	225	225	225	188	188	150	150
			103.5	103.5	77.6	51.7	41.4	31.0	23.3	18.1	15.5	15.5	15.5	13.0	13.0	10.3	10.3
Aluminum, Lead Lined, One Side Max. Temp. 250°F/121°C	Min. ⁴ Max.	69	47	27	21	17	14	11	9	8	8	6					
		4.8	3.2	1.9	1.4	1.2	1.0	0.8	0.6	0.6	0.6	0.4					
		700	500	350	250	200	150	100	90	80	70	60					
			48.3	34.5	24.1	17.2	13.8	10.3	6.9	6.2	5.5	4.8	4.1				
Aluminum, Teflon Coated, Both Sides Max. Temp. 250°F/121°C	Min. ⁴ Max.	75	53	42	38	23	15	12	12	11	9	9	9	9	9	9	
		5.2	3.7	2.9	2.6	1.6	1.0	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
		1500	1500	1125	750	600	450	338	263	225	225	225	225	188	188	150	150
			103.5	103.5	77.6	51.7	41.4	31.0	23.3	18.1	15.5	15.5	15.5	13.0	13.0	10.3	10.3
Aluminum, Teflon Coated, One Side Max. Temp. 250°F/121°C	Min. ⁴ Max.	51	35	30	21	17	12	8	8	6	6	6	6	6	6	6	
		3.5	2.4	2.1	1.4	1.2	0.8	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
		1500	1500	1125	750	600	450	338	263	225	225	225	188	188	150	150	
			103.5	103.5	77.6	51.7	41.4	31.0	23.3	18.1	15.5	15.5	15.5	13.9	13.0	10.3	10.3
Aluminum, Urethane Coated, One Side, Max. Temp. 250°F/121°C	Min. ⁴ Max.	53	38	33	23	18	12	9	9	8	8	8	8	8	8	8	
		3.7	2.5	2.3	1.6	1.2	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
		1500	1500	1125	750	600	450	338	263	225	225	225	188	188	150	150	
			103.5	103.5	77.6	51.7	41.4	31.0	23.3	18.1	15.5	15.5	15.5	13.0	13.0	10.3	10.3
Silver, Max. Temp. 250°F/121°C	Min. ⁴ Max.	188	128	83	53	38	30	26									
		13.0	8.8	5.7	3.7	2.6	2.1	1.8									
		6000	3000	3000	3000	2250	1500	750									
			413.8	206.9	206.9	206.9	155.2	103.5	51.7								
Nickel, Max. Temp. 800°F/427°C	Min. ⁴ Max.	190	125	75	46	38	33	24	20	20	20	18	18	18	18	40	
		13.1	8.6	5.2	3.2	2.6	2.3	1.7	1.4	1.4	1.4	1.2	1.2	1.2	1.2	2.8	
		6000	3000	3000	3000	3000	2160	1440	720	720	720	720	720	720	720	720	
			413.8	206.9	206.9	206.9	149.0	99.3	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	
Monel, Max. Temp. 900°F/482°C	Min. ⁴ Max.	250	175	105	80	54	43	37	30	28	26	24	22	20	20	55	
		17.2	12.1	7.2	5.5	3.7	3.0	2.6	2.1	1.9	1.8	1.7	1.5	1.4	1.4	3.8	
		6000	3000	3000	3000	3000	2160	1440	720	720	720	720	720	720	720	720	
			413.8	206.9	206.9	206.9	149.0	99.3	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	
Inconel, Max. Temp. 1100°F/593°C	Min. ⁴ Max.	410	290	180	130	100	75	40	32	27	23	20	18	16	16	45	
		28.3	20.0	12.4	9.0	6.9	5.2	2.8	2.2	1.9	1.6	1.4	1.2	1.1	1.1	3.1	
		6000	3000	3000	3000	3000	2160	1440	720	720	720	720	720	720	720	720	
			413.8	206.9	206.9	206.9	149.0	99.3	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	
316 Stainless Steel, Max. Temp. 800°F/482°C	Min. ⁴ Max.	485	365	195	135	105	85	65	50	50	48	44	38	30	27	27	
		33.5	25.2	13.4	9.3	7.2	5.9	4.5	3.4	3.4	3.3	3.0	2.6	2.1	1.9	1.9	
		6000	3000	3000	3000	3000	2160	1440	720	720	720	720	720	720	720	720	
			413.8	206.9	206.9	206.9	149.0	99.3	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	

Note 1: Burst pressures printed black are PSIG, blue are barg
 Note 2: Consult factory for discs larger than 24" in diameter (DN600)
 Note 3: Must have a retainer ring to support plastic seal
 Note 4: Lower minimum burst pressures may be possible. Consult factory for availability and performance limitations.

TABLE 3 HO/HOV Series Normal Rupture Tolerance*

Marked Rupture Pressure		Rupture Tolerance
PSIG @ 72°F	barg @ 22°C	
less than 5	less than .345	±1psi/.07barg
5-14.99	.345-1.034	±1.5psi/.103barg
15-40	1.034-2.758	±2psi/.138barg
above 40	above 2.758	±5%

TABLE 2

HO/HOV Series Standard Mfg. Ranges*

Specified Rupture Pressure		Mfg. Range % @ 72°F/22°C
PSIG @ 72°F	barg @ 22°C	
less than 4	less than .276	zero
4-8	.3-6	+40 to -40
9-12	.6-8	+30 to -30
13-20	.9-1.4	+20 to -10
21-45	1.5-3.1	+16 to -8
46-90	3.2-6.2	+12 to -6
91-270	6.3-18.6	+10 to -5
271-up	18.7-up	+6 to -3

*Consult Fike for disc with less than standard manufacturing range or rupture tolerance.

TABLE 4 PLHO/PLHOV Series Rupture Disc Burst Pressures¹ @ 72°F/22°C

Seal Member	Size ²	In	1	1 ½	2	3	4	6	8
		DN	25	40	50	80	100	150	200
Teflon Max. Temp. 450°F/232°C	Min	60	40	25	20	17	15	12	12
	Max	4.1	2.8	1.7	1.4	1.2	1.0	0.8	0.8
		285	285	285	285	285	285	285	285
		19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7

Note 1: Burst pressures printed black are PSIG, blue are barg.
 Note 2: Discs larger than 8" (DN 200) consult factory.
 Note 3: PLHO/PLHOV not available with  certificates.