

Figure 1

Description

The typical Conventional Bolted Type Rupture Disc Holder is a two-piece unit consisting of a base flange (inlet) and a holddown flange (outlet). The 30° angular seating surfaces of these flanges are machined to grip Fike's Conventional Prebulged and CPV Series and HO/HOV Series Rupture Discs. When assembled, the crown (bulged portion) of the disc protrudes into the holddown flange and a metal to metal seal is provided. See Figure 2.

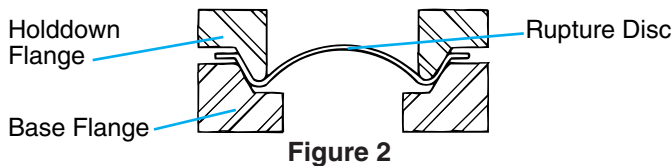


Figure 2

Fike's Bolted Type Rupture Disc Holders can be incorporated into a pressure system by welded or threaded connections or bolted between ANSI companion flanges. Bolted Type Rupture Disc Holder design is based on ANSI B16.5 dimensional standards to provide compatibility with ANSI flanges.

Standard flange dimensions are located in Table 3 while configurations, with assembly letter designations, are illustrated in Figure 1.

"G Insert" type rupture disc holders are furnished with a method of preassembly so the fragile rupture disc may be installed at a workbench or some other convenient location. Once the disc is in place the unit may be assembled and installed into the line, minimizing the chance of damage to the rupture disc.

Flexible gaskets are not recommended for use between companion flanges and the "G" or "G Insert" holders. However, when the minimum bolt load required to provide an adequate clamping of the disc is maintained and is compatible with the maximum non-flow compression characteristics of the gasket, then flexible gaskets may be used.

When welding connections are required consult Fike for the schedule of pipe bore standardly available, or the required schedule of pipe bore must be specified by the customer.

To overcome slippage of a rupture disc in a high pressure application Fike designed a heavy lip disc and holder combination. Heavy Lip and Light Lip designations are outlined in Table 2.

Carbon steel and 316 Stainless steel are the standard materials of construction. Monel, Inconel, Hastelloy, and other materials can be furnished.

Conventional Bolted Type Series

For use with Conventional Prebulged, CPV & HO/HOV Series Rupture Discs

Ordering Information

When ordering Conventional Bolted Type Rupture Disc Holders it is necessary to specify the following: Size, ANSI rating, type of assembly (A, B, C, D, E, F, G, G Insert, H, or I), material requirements for the inlet and outlet. Studs and nuts of appropriate length will be furnished in standard material unless otherwise specified.

TABLE 1

Maximum Non-Shock Service Pressure Ratings In PSIG For Fike Bolted Type Rupture Disc Holders

Service Temperatures °F	Material	ANSI (ASA) Rating					
		150	300	600	900	1500	2500
-20 to +100	Carbon steel	285	740	1480	2220	3705	6170
	304 SST	275	720	1440	2160	3600	6000
	316 SST	275	720	1440	2160	3600	6000
150	Carbon Steel	273	708	1415	2123	3540	5898
	304 SST	255	660	1320	1980	3300	5500
	316 SST	258	670	1340	2010	3348	5580
200	Carbon Steel	260	675	1350	2025	3375	5625
	304 SST	235	600	1200	1800	3000	5000
	316 SST	240	620	1240	1860	3095	5160
250	Carbon Steel	245	665	1333	1998	3328	5548
	304 SST	220	565	1128	1693	2820	4700
	316 SST	228	590	1180	1770	2945	4910
300	Carbon Steel	230	655	1315	1970	3280	5470
	304 SST	205	530	1055	1585	2640	4400
	316 SST	215	560	1120	1680	2795	4660
350	Carbon Steel	215	645	1293	1935	3225	5375
	304 SST	193	500	998	1498	2495	4160
	316 SST	205	538	1075	1610	2683	4470
400	Carbon Steel	200	635	1270	1900	3170	5280
	304 SST	180	470	940	1410	2350	3920
	316 SST	195	515	1030	1540	2570	4280
450	Carbon Steel	185	618	1235	1848	3083	5135
	304 SST	175	453	908	1360	2268	3780
	316 SST	183	498	993	1488	2480	4130
500	Carbon Steel	170	600	1200	1795	2995	4990
	304 SST	170	435	875	1310	2185	3640
	316 SST	170	480	955	1435	2390	3980
550	Carbon Steel	155	575	1148	1718	2865	4775
	304 SST	155	425	853	1278	2130	3550
	316 SST	155	465	930	1395	2323	3870
600	Carbon Steel	140	550	1095	1640	2735	4560
	304 SST	140	415	830	1245	2075	3460
	316 SST	140	450	905	1355	2255	3760
650	Carbon Steel	125	535	1075	1610	2685	4475
	304 SST	125	410	815	1225	2040	3400
	316 SST	125	445	890	1330	2220	3700
700	Carbon Steel	110	535	1065	1600	2665	4440
	304 SST	110	405	805	1210	2015	3360
	316 SST	110	430	865	1295	2160	3600
750	Carbon Steel	95	505	1010	1510	2520	4200
	304 SST	95	400	795	1195	1990	3320
	316 SST	95	425	845	1270	2110	3520
800	Carbon Steel	80	410	825	1235	2060	3430
	304 SST	80	395	790	1180	1970	3280
	316 SST	80	415	830	1245	2075	3460
850	Carbon Steel	65	270	535	805	1340	2230
	304 SST	65	390	780	1165	1945	3240
	316 SST	65	405	810	1215	2030	3380
900	Carbon Steel	50	170	345	515	860	1430
	304 SST	50	385	770	1150	1920	3200
	316 SST	50	395	790	1180	1970	3280
950	Carbon Steel	35	105	205	310	515	860
	304 SST	35	375	750	1125	1870	3120
	316 SST	35	385	775	1160	1930	3220
1000	Carbon Steel	20	50	105	155	260	430
	304 SST	20	325	645	965	1610	2685
	316 SST	20	365	725	1090	1820	3030

TABLE 2

Seating Lip Designations, Conventional Bolted Type Rupture Disc Holders

Nominal Pipe Size	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24
150 ANSI	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL
300 ANSI	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL	LL
600 ANSI	LL	LL	LL	LL	LL/HL	LL	LL	LL	LL							
900 ANSI	HL	HL	HL	HL	HL	HL	HL	HL								
1500 ANSI	HL	HL	HL	HL	HL	HL	HL									

LL = Light Lip

HL = Heavy Lip

TABLE 3

Standard Dimensions for Fike Conventional Bolted Type Rupture Disc Holders

NOMINAL SIZE	ANSI RATING	MAXIMUM PRESSURE	OUTSIDE DIA		BOLT CIRCLE	BOLTS		BOLT LENGTH				APPROXIMATE OVERALL HEIGHT (BY ASSEMBLY)													
			A-G, H&I	GI		NO	SIZE	A-F	A & D	G & GI	G, H & I	A	B	C	D	E	F	GI (FREE OUTLET)	GI (COMP FLANGE)	GI	H	I			
1/2"	150	25	3-1/2	1-3/4	2-3/8	4	1/2	3	3-1/2	4	3-1/2	2	2-1/2	3-3/8	3-1/16	3-1/2	4-1/2	1-9/16	1-9/16	1-9/16	1-9/16	1-9/16	2-1/16	3-1/16	3-1/16
	300		3-3/4	2	2-5/8	4	1/2	3	3-1/2	5	3-1/2	2	2-1/2	3-3/8	3-3/16	3-5/8	4-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	2-1/16	3-1/16	3
	600		3-3/4	2	2-5/8	4	1/2	3	3-3/4	5	3-3/4	2	2-1/2	3-3/8	3-3/16	3-5/8	4-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	2-1/16	3-1/16	3
	900		4-3/4	2-3/8	3-1/4	4	3/4	5	6	6	5-3/4	2-5/8	2-7/8	3-15/16	3-7/8	4	5	2-3/16	1-9/16	1-9/16	1-9/16	1-9/16	2-3/16	3-1/4	3-1/4
	1500		4-3/4	2-3/8	3-1/4	4	3/4	5	6	6	5-3/4	2-5/8	2-7/8	3-15/16	3-7/8	4	5	2-3/16	1-3/4	1-9/16	1-9/16	1-9/16	2-3/16	3-1/4	3-1/4

1. Approximate overall height does not include rupture disc.
2. Approximate overall height will vary when installing 1/4 NPT gauge tap.
3. Consult factory for overall height when using gauge taps other than 1/4 NPT.
4. 1/4 NPT gauge taps will increase the overall height for 1/2 900 ANSI and 1/2 1500 ANSI holders.
5. The crown of the rupture disc is not contained by the outlet holder's in sizes 4" and larger for the "G" and G Insert assemblies.