

Impervious Graphite Type GD, GDV, GDL, GD-HT, GDV-HT

Description

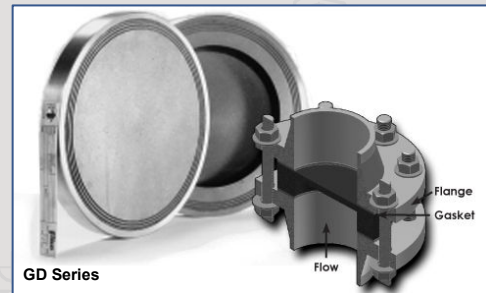
Fike graphite bursting discs are manufactured from high purity carbon, impregnated with a phenolic resin rendering the graphite impermeable, resulting in the name "impervious graphite".

By the nature graphite bursting discs will fragment upon bursting.

There are different basic series of Fike graphite bursting discs available, each offering specific product features allowing selection of the most suitable type for each individual application.

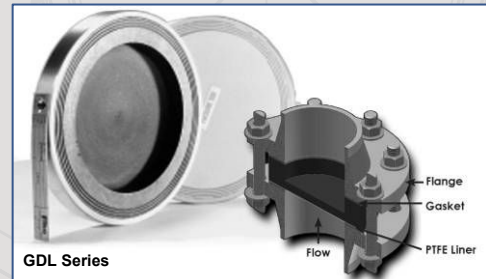
GD Series

GD discs suit most processing applications, they fit directly between PN10/16/25/40 or ANSI Class 150/300 flanges, and are available in diameters from 1" (DN 25) to 24" (DN 600). Burst pressures from 0,08 barg for temperatures below 200°C. For GD discs used in vacuum service, a vacuum support will be required if the burst pressure is below 1,5 barg. If vacuum support is needed, type changes to GDV series.



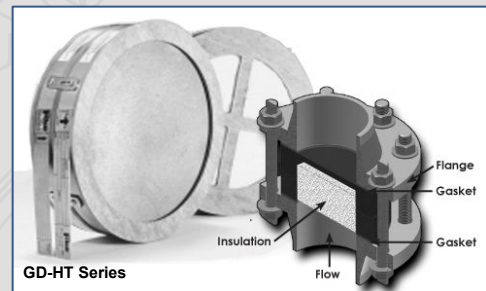
GDV Series

GDV discs are typically supplied for applications where vacuum resistance is required, especially when the required burst pressure is below 1,5 barg. The GDV Series are produced for PN10/16/25/40 and ANSI Class 150/300 flanges. The vacuum support grid does have a reducing effect on the available free flowing area after burst.



GDL Series

GDL discs offer extended corrosion resistance to highly oxidizing agents, halogens and other corrosives, except free fluorine. A sheet of PTFE is used as a chemical barrier on the process side of the disc. GDL series are available for temperatures up to 200°C. In case GDL series are required to withstand vacuum, the burst pressure will need to exceed 1.5 barg, maximum temperature restricted to 160°C.



GD-HT, GDV-HT Series

GD-HT and GDV-HT discs utilize fibrous insulation material to accommodate temperatures up to 350°C for gas and vapour phase applications, and up to 250°C in liquid phase applications. The insulation material is attacked by hydrofluoric and phosphoric acids, and concentrated alkalis.



Features and Benefits

- Low burst pressures available
- Excellent corrosion resistance (except for free fluorine); additional protection against corrosion offered by Teflon®-lining on process side
- Common sizes and burst pressures available from stock
- Mounted directly between companion flanges

All above data are subject to change without notice. They must not be used unless confirmed in writing. 8.1600.00.5

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Burst Pressure in barg at 22°C

ANSI (1)		DIN (1)		O.D.	I.D.	Thickness (mm)		Nominal relief area (cm ²) (2)		BP (barg)	
Inch	ANSI	DN	PN	mm	mm	GD/GDV/ GDL	GDV-HT	GD	GDV	MIN	MAX
1"	150	25	6	63	25,4	22	44	5,1	2,55	0,8	40
		25	10-40	70	25,4	22	11	5,1	2,55	0,8	40
1 1/2"	150			82	38,1	23	46	11,6	5,92	0,69	35
		40	6	86	38,1	23	46	11,6	5,92	0,69	35
2"	150	40	10-40	92	38,1	23	46	11,6	5,92	0,69	35
				101	50,8	21	18	20	11	0,69	30
3"	150	50	10-40	106	50,8	24	48	20	11	0,69	30
				132	76,2	27	54	45,8	28,85	0,34	20
4"	150	80	6	141	76,2	27	54	45,8	28,85	0,34	20
				162	101,6	29	58	81,3	48,78	0,21	15
6"	150	100	10-16	171	101,6	29	58	81,3	48,78	0,21	15
				217	152,4	34	68	182,5	109,5	0,14	10
8"	150	200	10-16	273	203,2	34	68	325	195	0,14	10
				276	203,2	39	78	325	195	0,14	8
10"	150	250	6	317	254	44	88	506	293,48	0,14	6
				328	254	44	88	506	293,48	0,14	6
12"	150	300	6	373	304,8	49	98	729	408,24	0,14	4
				376	304,8	49	98	729	408,24	0,14	4
		300	10	384	304,8	49	98	729	408,24	0,14	4
		300	16	406	304,8	49	98	729	408,24	0,14	4

Notes

- (1) For larger sizes / other burst pressures, please consult factory.
- (2) For use of GD, GDV or GDL with thermal insulator, consult factory.

Performance Tolerances (1)

Nominal Size	Burst Pressure Range	Performance Tolerance
DN25/1"	Min. to 2,5 barg	± 25%
DN25/1"	> 2,5 barg	± 10%
DN40/1.5"	Min. to 1,5 barg	± 25%
DN40/1.5"	> 1,5 barg	± 10%
DN50/2"	Min. to 1 barg	± 25%
DN50/2"	> 1 barg	± 10%
DN80/3"	Min. to 0,5 barg	± 25%
DN80/3"	> 0,5 barg	± 10%
DN100/4"	Min. to 0,4 barg	± 25%
DN100/4"	> 0,4 barg	± 10%
DN150/6"	Min. to 0,35 barg	± 25%
DN150/6"	> 0,35 barg	± 10%
DN200/8"	Min. to 0,35 barg	± 25%
DN200/8"	> 0,35 barg	± 10%

Note

- (1) For reduced tolerances, please consult factory.

Performance tolerance as specified by ISO/EN is a total tolerance which includes both manufacturing and bursting tolerance.

As per ISO/EN the bursting discs can be marked with: Specified burst pressure with a performance tolerance (in % or a value).

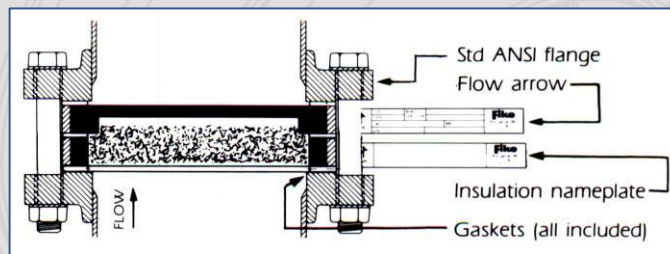
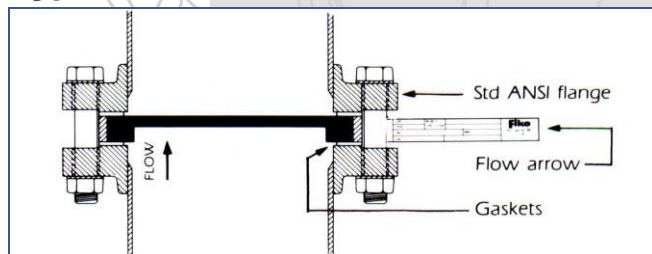
E.g.: 10 barg at 22°C ± 10% (± 1 barg).

Maximum and minimum burst pressure.

E.g.: Max 11 barg at 22°C - min 9 barg at 22°C

On request bursting discs can be marked as per ASME code section VIII with the average burst test result and the bursting tolerance of ± 5% for burst pressures ≥ 2,76 barg, (0,15 barg for burst pressures < 2,76 barg).

Typical installations



Performance Attributes		Process Media	
Operating ratio	Vacuum resistance	Liquid	Vapour / gas
90%	Yes	Yes	Yes