



DATA SHEET

REVERSE ACTING BURSTING DISC TYPE LARGE ATLAS

DESCRIPTION

The LARGE ATLAS bursting disc is an extension of Fike's current ATLAS bursting disc product offering. LARGE ATLAS utilizes the proven and patented G2 manufacturing technology to produce bursting discs with improved performance characteristics such as full vacuum/back pressure resistance, 95% operating ratio and large standard burst pressure offering. The LARGE ATLAS is a ground breaking industry solution where safety relief valves are not a viable alternative and holders with knife blades are no longer desired. The LARGE ATLAS has a wide range of applications ideal for markets, including chemical manufacturing, oil & gas and refineries.



APPROVALS:

- CE
- ASME

G2- A FIKE TECHNOLOGY

All disc families in the G2 product line represent a clean break from traditional disc manufacturing processes. The engineering methods used to develop and validate these products have provided industry leading performance characteristics across all pressure, material and size configurations. The advanced automated processes defining the G2 technology significantly increase lot to lot consistency helping to provide fast, economical industry solutions with its improved reliability.



FEATURES AND BENEFITS

- Operating ratio of 95%
- $\pm 5\%$ standard performance tolerance
- Non-fragmenting opening
- Lowest maintenance cost
- Full vacuum resistance
- Operates in both gas and liquid applications (with a minimum free vapor volume)
- Excellent cyclic durability
- High back pressure resistance: 105% of burst pressure for set pressure above 1.22 barg

SPECIFICATIONS

Type of Disc	Large Atlas
Action	Reverse Acting
Available Size Range	14" – 16" – 18" – 20" – 24" – 26" – 28" – 30" – 32" – 36" – 42" DN350 – DN400 – DN450 – DN500 – DN600 – DN650 – DN700 – DN750 – DN800 – DN900 – DN 1050
Disc Material	316/316L SST (1.4401/1.4404) Hastelloy® C276 (2.4819) Inconel® 625 (2.4856)
Maximum Temperature	482°C (316/ 316L SST/ Hastelloy® C276) 593°C (Inconel® 625)
Performance Tolerance	± 0.07 barg for BP < 1.36 barg $\pm 5\%$ for BP ≥ 1.36 barg
Max. Recommended Operating Pressure	95% of minimum burst pressure
Fluid State	Gas or liquid with minimum free vapor volume
Vacuum	Full
Non-Fragmenting	Yes
Holder Type	Gi-type / TQ optional ¹
Approval	CE & ASME

(1) Consult factory.



MINIMUM/MAXIMUM BURST PRESSURE IN BARG (PSIG) @ 22°C (72°F)

		316/ 316L SST (1.4401/1.4404)		Inconel® 625 (2.4856)		Hastelloy® C276 (2.4819)			
		Max. Temp.: 482°C (900°F)		Max. Temp.: 482°C (900°F)		Max. Temp.: 593°C (1100°F)			
Size		Min BP		Min BP		Min BP		Max BP all Materials	
IN	DN	PSIG	BARG	PSIG	BARG	PSIG	BARG	PSIG	BARG
14"	350	6.00	0.41	7.00	0.48	7.00	0.48	300	20.7
16"	400	5.00	0.34	7.00	0.48	7.00	0.48	250	17.2
18"	450	5.00	0.34	6.00	0.41	6.00	0.41	200	13.8
20"	500	4.50	0.31	5.00	0.34	5.00	0.34	180	12.4
24"	600	3.50	0.24	4.00	0.28	4.00	0.28	150	10.3
26"	650	3.50	0.24	4.00	0.28	4.00	0.28	150	10.3
28"	700	3.50	0.24	4.00	0.28	4.00	0.28	150	10.3
30"	750	3.50	0.24	4.00	0.28	4.00	0.28	140	9.65
32"	800	3.25	0.22	4.00	0.28	4.00	0.28	125	8.62
36"	900	3.25	0.22	4.00	0.28	4.00	0.28	100	6.89
42"	1050	3.25	0.22	4.00	0.28	4.00	0.28	75	5.17

MINIMUM FREE VAPOR VOLUMES & RELIEF AREA

Size		Minimum Free Vapor Volume*		Relief Area	
in	DN	ft³	m³	in²	cm²
14	350	7	0.21	117	752
16	400	11	0.32	153	989
18	450	16	0.45	195	1258
20	500	22	0.62	239	1540
24	600	38	1.07	346	2234
26	650	48	1.36	408	2630
28	700	60	1.69	474	3058
30	750	74	2.08	541	3491
32	800	89	2.53	617	3978
36	900	127	3.60	784	5057
42	1050	202	5.72	1066	6878

*Suitable for use in liquid systems only with listed volumes of compressible vapor against the disc at the time of opening.



ACCESSORIES AND HOLDERS

The Large ATLAS uses the Insert or Pretorqueable ATLAS series bursting disc holder. These holders are available in carbon steel and 316 stainless steel. Other materials are available on request. Holder accessories include eyebolts, pre-assembly hardware, and gauge taps for installation of pressure gauges or burst indication devices. See data sheet R.2.50.01 for more information.

Performance Attributes				Process Media		Bursting Disc Holders	
Operating Ratio	Non-Fragmenting	Vacuum Resistance	Pulsating / Cycling	Vapor / Gas	Liquid	Bolted Type	Pretorqueable
95%	Yes	Yes	Yes	Yes	Yes ¹	Yes	Yes

(1) Minimum free vapour volume required, see table above.

U.S. Patents 6.945.420, 8.333.212, and Foreign Patents