

RD320, REVERSE ACTING, RUPTURE DISC & HOLDER

The RD320 is a reverse-acting scored rupture disc, suitable for most common industrial pressure relief applications. Utilizing Fike’s patented G2 Manufacturing Technology, this rupture disc is pre-engineered and will provide highly accurate and reliable overpressure protection.



RD320 Rupture Disc

SPECIFICATIONS

SIZES	1 – 12 in	DN25 – DN300		
DISC MATERIALS	316 / 316L SST Hastelloy® C276 Inconel® 625	1.4401 / 1.4404 2.4819 2.4856		
BURST PRESSURE RANGE	7 – 600 psig	0.48 – 41.37 barg		
BURST PRESSURE TOLERANCE	See table on page 2			
OPERATING RATIO	For standard applications 90%	For CE or KOSHA applications < 2.76 barg = 90% > 2.76 barg = 95%		
STANDARD MANUFACTURING RANGE	Zero	N/A		
MAX OPERATING TEMP	See table on page 2	See table on page 2		
K_{RG} / K_{RL} / K_{RGL} & MNFA⁽¹⁾	K _{RG} = 0.45 / K _{RL} = 1.25 / K _{RGL} = 0.45			
CYCLING / PULSATING DUTY	Will achieve at least 10,000 cycles to 90% operating ratio			
VACUUM RESISTANCE	Full			
BACK PRESSURE	100% of burst pressure			
PROCESS MEDIA	Gas / Vapor, Liquid, & two phase			
FRAGMENTATION	Non-fragmenting			
APPROVALS	 ASME	 CE MARKED	 KOSHA	 CRN

(1) More information on Kr-values and MNFA can be found [here \(TB8104\)](#).

OPTIONS

BURST INDICATOR⁽¹⁾	BurstCheck™ / BurstCheck Plus™ / BurstCheck 2™ / RI / RI2
COATINGS	FEP
LINERS	FEP, PFA ⁽²⁾

- (1) More information on burst indicators can be found [here \(Burst Indicators Data Sheet\)](#).
- (2) See additional liner data on next page.

MINIMUM / MAXIMUM BURST PRESSURE IN PSIG/BARG @ 72°F/22°C⁽¹⁾

Material		316/316L SST 1.4401/1.4404				Hastelloy® C276 2.4819				Inconel® 625 2.4856			
Max Operating Temperature		900°F		482°C		900°F		482°C		1100°F		593°C	
Size		PSIG		BARG		PSIG		BARG		PSIG		BARG	
In	DN	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1 ⁽²⁾	25 ⁽²⁾	10	525	0.69	36.20	12	600	0.83	41.37	10	450	0.69	31.03
1.5	40	8	385 ⁽³⁾	0.55	26.54 ⁽³⁾	8	485 ⁽³⁾	0.55	33.44 ⁽³⁾	8	215	0.55	14.82
2	50	8	390	0.55	26.89	8	470	0.55	32.41	8	150	0.55	10.34
3	80	7	325	0.48	22.41	7	430	0.48	29.65	7	80	0.48	5.52
4	100	7	285	0.48	19.65	7	300	0.48	20.68	7	60	0.48	4.14
6	150	8	200	0.55	13.79	8	200	0.55	13.79	8	200	0.55	13.79
8	200	8	150	0.55	10.34	8	140	0.55	9.65	9	145	0.62	10.00
10	250	8	100	0.55	6.89	8	90	0.55	6.21	8	95	0.55	6.55
12	300	8	70	0.55	4.83	8	60	0.55	4.14	8	70	0.55	4.83

- (1) For applications requiring higher burst pressures or larger sizes, please refer to the RD300 rupture disc data sheet R.1.53.01
- (2) 1 in / DN25 size is not suitable for liquid systems at burst pressure less than 20 psig / 1.38 barg with an inlet piping length greater than 10 in / 250 mm.
- (3) 385 psig / 26.54 barg is the maximum ASME certified burst pressure rating with a 316 / 316L (EN 1.4401 / 1.4404) SST ring. 200 psig / 13.79 barg is the maximum ASME certified burst pressure rating with a Hastelloy® C276 (EN 2.4819) ring
- (4) For applications requiring higher operating ratio or cycle life, please refer to the RD520 AXIUS® rupture disc data sheet R.1.37.01

BURST / PERFORMANCE TOLERANCES

BURST PRESSURE				TOLERANCE	
PSIG @ 72°F		BARG @ 22°C		PSI	BAR
≤ 40		≤ 2.76		± 2	± 0.14
> 40		> 2.76		± 5%	± 5%

OPTIONAL LINER MATERIAL DATA

SIZE		LINER MATERIAL	TEMPERATURE RANGE		MINIMUM BURST PRESSURE	
In	DN		°F	°C	PSIG	BARG
1 - 4	25 – 100	FEP	-40 to 400	-40 to 204	30	2.07
		PFA	-40 to 200	-40 to 93.3	45	3.10
		PFA	200 to 500	93.3 to 260	30	2.07
6 - 12	150 - 300	FEP	-40 to 400	-40 to 204	15	1.03
		PFA	-40 to 500	-40 to 260		

HOLDERS FOR RD320: XL/XLO



GI INSERT TYPE



TQ PRE-TORQUEABLE TYPE



TQ+ PRE-TORQUEABLE TYPE

XL: Standard Overall Height Profile
XLO: Low Overall Height Profile

“G Insert” type rupture disc holders are furnished with a method of preassembly so the 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.

Fike offers two types of pretorqueable holders, the “TQ+” and “TQ”. The purpose of the TQ+ and TQ holder designs are to allow rupture discs to be installed and then “torqued” to recommended static load levels ensuring proper clamping of the rupture disc within the assembly. This can take place at a workbench rather than in the field where conditions could be less than ideal, greatly reducing the possibility of assembly errors.

Once together, the rupture disc assembly may then be delivered to the field location and installed between companion flanges where additional torque loads applied are essential for proper functionality of the assembly. TQ+ and TQ assemblies may also be removed, inspected and replaced during routine maintenance schedules and plant turnarounds without compromising disc performance as long as the disc is not removed.

The TQ+ type holders were designed with the ability to be installed in multiple international flange rating configurations. The TQ+ can be specified for the following rupture disc models: RD320, RD520 AXIUS, SRL, SRX, and Poly-SD

SPECIFICATIONS ⁽¹⁾

SIZE	1 – 12 inches	DN25 - DN300
FLANGE RATING	ASME 150 – 600 / JIS 5K- JIS 63K	PN 10 - 100
FLANGE FACING	Serrated gasket faces standard, others available	
MATERIAL⁽²⁾	Stainless Steel 316, Stainless Steel 304, Hastelloy®, Inconel®, and Carbon Steel	1.4401/1.4404, 1.4301/1.4306, 2.4819, 2.4816, 1.0460
PRE-ASSEMBLY SCREWS	GI Insert Type comes with SST side clips TQ and TQ+ include pre-assembly screws	

(1) Holders are designed to fit within the standard bolt circle as defined by the customer specified flange rating.

(2) Additional materials available upon request. Consult factory if necessary.

ACCESSORIES ⁽¹⁾

GAUGE TAPS	When a gauge tap is requested, a ½” NPT is provided unless otherwise specified. See Dimensions table for limitations. For additional tap sizes/configurations consult factory
EXCESS FLOW VALVE	Installed to prevent pressure build-up between the rupture disc and downstream piping
J-HOOK	Used to ensure proper installation orientation
EYEBOLTS	Used to handle large and heavy holders
JACKSCREWS	Provide a means of separating piping flanges safely for rupture disc assembly installation
O-RING/GROOVE	Leak tight without O-ring/Groove to 1x10 ⁻⁴ atm cc/sec He Leak tight with O-ring/Groove to 1x10 ⁻⁶ atm cc/sec He

(1) More information on Accessories can be found [here \(Accessories Data Sheet\)](#).

HOLDER HEIGHTS

Size		ASSEMBLY HEIGHT ⁽¹⁾												Max Gauge Tap	
		GI INSERT TYPE				PRE-TORQUEABLE TQ				PRE-TORQUEABLE TQ+					
In	DN	XL		XLO		XL		XLO		XL		XLO		XL	XLO
		In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		
1	DN25	2.42	61.5	2.17	55.1	2.66	67.6	2.29	58.1	2.42	61.6	1.54	39.2	½”	¼”
1.5	DN40	2.94	74.7	2.19	55.7	3.18	80.9	2.18	55.5	2.95	74.8	1.76	44.6	½”	¼”
2	DN50	3.06	77.6	2.12	53.7	3.46	87.9	2.59	65.7	3.06	77.6	1.94	49.2	½”	½”
3	DN80	3.84	97.5	2.15	54.5	4.21	107.0	2.59	65.7	3.84	97.4	2.22	56.3	½”	½”
4	DN100	4.65	118.0	2.53	64.1	4.78	121.5	2.82	71.5	4.65	118.1	2.97	75.5	½”	½”
6	DN150	6.10	154.9	2.85	72.4	6.08	154.4	2.89	73.5	6.11	155.2	3.80	96.5	½”	½”
8	DN200	7.66	194.6	3.10	78.8	7.63	193.7	3.16	80.2	-	-	-	-	½”	½”
10	DN250	9.72	246.9	4.16	105.6	9.72	246.9	4.16	105.6	-	-	-	-	¾”	¾”
12	DN300	11.66	296.1	5.03	127.8	11.66	296.1	5.03	127.8	-	-	-	-	¾”	¾”

(1) Assembly height includes rupture disc