

RD540 SC, REVERSE ACTING, HYGIENIC RUPTURE DISC

RD540 SC is a high-performance, ultra-low-pressure reverse-acting disc specifically designed to meet the stringent hygienic and aseptic requirements of the biotech and pharmaceutical industries, as well as the hygienic needs of the food and beverage industries. It is free from indentations, crevices, or any other features that may trap process contaminants, which makes it optimal for clean in place and steam in place processes (CIP/SIP) and results in compliance with 3-A standard 60-01.



RD540 SC Rupture Disc

The RD540 SC has undergone thorough process development and validation testing to ensure its reliability with its standard offering including multiple sizes and gasket materials that meet global standards. The design makes it easy to install both in hygienic (Tri-Clamp) ferrules and NovAseptic tank connections (NA-Connect).

SPECIFICATIONS

SIZES	1 – 4 in	DN25 – DN100	
DISC ASSY MATERIAL	316 / 316L SST	1.4401 / 1.4404	
BURST PRESSURE RANGE	2.5 – 25 psig	0.17 – 1.72 barg	
BURST PRESSURE TOLERANCE	See table on page 2		
OPERATING RATIO	90% of Minimum Burst Tolerance		
STANDARD MANUFACTURING RANGE	Zero		
MAX OPERATING TEMP	See Gasket Information Table		
K_{RG} / K_{RL} / K_{RGL} & MNFA⁽¹⁾	K _{RG} (1 in) = 1.20 K _{RG} (1.5 – 4 in) = 0.72		
CYCLING / PULSATING DUTY	Validated to 10,000 cycles from zero pressure to 90% operating ratio		
VACUUM RESISTANCE	Burst Pressure < 5 psig [.345 bar]: will withstand 8 psig [0.55 bar] Burst Pressure ≥ 5 psig [.345 bar]: will withstand 12 psig [0.83 bar]		
BACK PRESSURE			
PROCESS MEDIA	Gas / Vapor Only		
FRAGMENTATION	Non-fragmenting		
APPROVALS	 ASME	 PED	 3-A

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

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

MATERIAL			316/316L SST 1.4401/1.4404			
SIZE ⁽³⁾		FERRULE	PSIG		BARG	
In	DN		MIN	MAX	MIN	MAX
1	-	ASME BPE	15	25	1.03	1.72
1.5	-	ASME BPE	3	10	0.21	0.69
2	-	ASME BPE	3	10	0.21	0.69
3	-	ASME BPE	2.5	10	0.17	0.69
4	-	ASME BPE	2.5	10	0.17	0.69
-	40	DIN 32676 Row A	3	10	0.21	0.69
-	50	DIN 32676 Row A	3	10	0.21	0.69
-	38	ISO 2852 Table 2	3	10	0.21	0.69
-	51	ISO 2852 Table 2	3	10	0.21	0.69
-	76.1	ISO 2852 Table 2	2.5	10	0.17	0.69

- (1) For applications requiring higher burst pressures or larger sizes, please refer to the AXIUS SC rupture disc data sheet R.1.43.01
- (2) See table below for the minimum inlet vapor volume requirement.

MINIMUM INLET VAPOR VOLUME (10 TIMES FERRULE ID)

SIZE	in ³	cm ³
1	5.17	84.72
1.5/DN38	20.20	331.02
DN40	26.51	434.42
2/DN50/DN51	51.36	841.64
3/DN76.1	185.67	3042.59
4	442.64	7253.57

BURST / PERFORMANCE TOLERANCES

BURST PRESSURE		TOLERANCE
PSIG @ 72°F	BARG @ 22°C	
< 5	< 0.34	± 20%
5 - 10	0.34 – 0.69	± 15%
≥ 15	1.03	± 2 psig

GASKET INFORMATION

GASKET MATERIAL ⁽³⁾	SERVICE TEMPERATURE (°F)		SERVICE TEMPERATURE (°C)	
	MIN	MAX	MIN	MAX
White EPDM (Peroxide Cured) ⁽¹⁾⁽³⁾⁽⁴⁾	-40	275	-40	135
White EPDM (Sulfur Cured) ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	-40	300	-40	149
Black EPDM (Sulfur Cured) ⁽¹⁾⁽³⁾⁽⁴⁾	-40	300	-40	149
Silicon (Platinum Cured) ⁽¹⁾⁽³⁾⁽⁴⁾	-40	450	-40	232
Viton® ⁽¹⁾⁽³⁾⁽⁴⁾	-20	450	-29	232

- (1) Not available in all sizes.
 (2) 3-A approval applies to all gaskets except white EPDM (Sulphur Cured).
 (3) FDA 21CFR177.2600, USP Class VI, and EC 1935/2004 approved.
 (4) Free of Animal Derived Ingredients.